To the Graduate Council:

I am submitting herewith a dissertation written by Gretchen E. Ely entitled "Dating Violence and Psychosocial Problems: Exploratory Findings from a Sample of Adolescents Facing Unwanted Pregnancy." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in social work.

John S. Wodarski

Major Professor

We have read this dissertation
And recommend its acceptance:

William R. Nugent

Catherine N. Dulmus

Marcus L. Ambrester

Accepted for the Council:
Anne Mayhew
Vice Provost and
Dean of Graduate Studies

(Original signatures are on file with official student records)

DATING VIOLENCE AND PSYCHOSOCIAL PROBLEMS: EXPLORATORY FINDINGS FROM A SAMPLE OF ADOLESCENTS FACING UNWANTED PREGNANCY

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Gretchen E. Ely
December 2003

Abstract

Empirical studies of adolescent dating violence have mainly focused on changing attitudes and knowledge levels. These studies are mostly conducted in mixed gender classroom settings. Results from these studies do not provide knowledge of which psychological/social (psychosocial) problems co-occur with dating violence in at-risk adolescent populations. The current study provides exploratory information related to dating violence in adolescent pregnancy termination patients, a subset of the population virtually ignored by the adolescent literature. In this study, 120 adolescent pregnancy termination patients ages 14 through 21 completed the Conflict in Adolescent Relationships Inventory (CADRI) and the Multi-dimensional Adolescent Assessment Scale (MAAS). Linear regression equations indicate that seven of the psychosocial problems measured by the MAAS are significantly associated with dating violence in this sample: depression, problems with self-esteem, guilt, risk of suicide, personal stress confused thinking and disturbing thoughts. The overall dating violence scores were divided into two groups at the median into a lower dating violence group and a higher dating violence group. A discriminant analysis (DA) was conducted to determine whether or not scores on the MAAS subscales could be used to predict dating violence group involvement in this sample. The discriminant function was not significant and the eigenvalue was low indicating that lower or higher dating violence group membership could not be predicted using subscale scores on the MAAS. Implications for practice, policy and research are discussed.

Table of Contents

List of Tables

List of Figures

CHAPTER I- INTRODUCTION

The problems of adolescent involvement in destructive behaviors are not new to our society. Modern adolescent involvement in violence and violent relationships is commonplace. The Center for Disease Control's 1997 Youth Risk Behavior Survey (1998) indicates that students in grades nine through twelve engaged in 115 physical fights per 100 adolescents during the 12 months preceding the survey. Groups of teen girls have not been the traditional focus of dating violent interventions, yet research demonstrates they are greatly at risk for the problem (Sege, et. al., 1996).

Although a well-documented social problem, adolescent dating violence is still misunderstood. Simple descriptive information, such as realistic estimates of prevalence rates are non-existent in large part because there is such variety within the published literature regarding the definition of dating violence and with whom the violence took place. Methodological limitations also limit scientific understanding of the problem. Vague studies result in unreliable information about the causes of and potential solutions for adolescent dating violence.

Reported levels of dating violence vary greatly between empirical dating violence studies. One reason for this appears to be a lack of specifications of constructs within dating violence studies.

One construct that is often unclear is with which partner the reported dating violence occurred. In the present study, the partner in question is highly specified. This study calls for participants to identify dating violence that occurred only with the co-conceiving

partner of the unwanted pregnancy. The results of this exploratory study, then, may greatly contribute to knowledge related to prevalence of dating violence in at risk adolescent populations.

The consequences of involvement in dating violence are quite serious, especially for female victims. Researchers report that dating violence against adolescent women limits their ability to protect themselves against sexually transmitted diseases, unwanted pregnancy, and undesired sexual intercourse, while increasing their risk for acquiring AIDS/HIV and other sexually transmitted diseases (Valois, et. al., 1999; Wood, Maforah & Jewkes, 1998).

Dating violence also appears to co-occur with significant psychopathology and/or mental health problems (Chase, Treboux & O'Leary, 2002; Loeber, et. al., 1998), such as serious eating disorders, antisocial personality characteristics, disruption of normal social development, low self-concept, negative body image, lack of success in school, and involvement in other types of violence (Ackard & Neumark-Sztainer, 2002; Bergman, 1992; Foster, 2001; Riggs & Caulfield, 1997; Ryan, 1998; Williams & Martinez, 1999).

Proximal factors (Chase, Treboux & O'Leary, 2002) have also been found to be associated with adolescent involvement in dating violence, such as: reported need to gain control over partner, reported dissatisfaction with relationship power, reported romantic jealousy, and verbal aggression (Bookwala, et. al., 1992; Ronfeldt, Kimmerling & Arias, 1998).

Few dating violence studies to date have examined the psychological and/or social problems that are associated with dating violence in at risk adolescents (Chase, Treboux, & O'Leary, 2002), so very little is known about the factors associated with

dating violence in at risk adolescent populations. Most dating violence studies focus on adolescents within a secondary public school system and most studies measure the attitudes associated with dating violence rather than the psychological/social (psychosocial) problems that co-occur with dating violence. Researchers involved in recent dating violence studies call specifically for additional research involving better data collection on the factors related to dating violence in at risk adolescent populations (Ackard & Neumark-Sztainer, 2002; Chase, Treboux & O'Leary, 2002).

Despite a growing body of literature related to dating violence, the existing research findings come mainly from one single study containing mild to severe methodological limitations. Follow-up and longitudinal studies are virtually non-existent. Solid evidence examining the relationship between adolescent psychological/social (psychosocial) problems and dating violence does not appear in the dating violence or adolescent literature. Thus, a need for solid descriptive and predictive dating violence information in at risk adolescents remains.

The relationship between adolescent violence and other psychosocial problems is a problem of serious concern to the social work field. Researchers must flesh out the causes of dating violence so that appropriate prevention methods can be implemented. Increased conceptual information about dating violence in adolescents could greatly enhance the ability of social workers to help both victims and perpetrators (Chase, Treboux & O'Leary, 2002). An important step to understanding what types of prevention efforts might best reduce dating violence is to examine many types of psychosocial problems that are associated with dating violence in a variety of at-risk populations, in order to begin to develop a model that might predict youth dating violence involvement.

The Problem

Dating violence is a problem that results in especially serious consequences for women, our society and our economy. Young women suffer psychological, emotional and physical abuse that often leads to Post Traumatic Stress Disorder (Loeber, et. al., 1998) and other types of serious mental health problems (Chase, Treboux & O'Leary, 2002), which in turn results in the need for costly health and medical services. Dating violence also results in physical injuries that drive up emergency room use and medical costs (Sege, 1996). For example, medical doctors estimate that 10% of intentional injuries to adolescents are the result of dating violence, and serious physical injury often occurs as a result of dating violence (Carlson, 1987; Simons, Lin & Gordon, 1998; Sege, et. al., 1996; Williams & Martinez, 1999), resulting in costly visits to doctor's offices and emergency rooms.

Statement of the Problem

Despite advances in knowledge about adolescent dating violence, not enough attention has been paid to empirical knowledge of contextual issues related to dating violence in at-risk populations using measures that are developmentally appropriate for adolescents (Rickert, Vaughn & Wiemann, 2002). Social work researchers need a solid model to predict involvement in dating violence so that interventions can be developed to prevent and combat the problem. As such, there is a need to conduct descriptive research on at risk adolescents, dating violence and co-occurring factors so that researchers can begin to build this vital model.

One at-risk adolescent population virtually omitted from research is girls who choose to terminate an unwanted pregnancy. Studies of adolescents who chose abortion are quite uncommon most likely due to the sensitive nature of the topic and clinic concerns regarding confidentiality (Corcoran, 1999). In addition, the reproductive health literature indicates that abortions are underreported by adolescents in general surveys and in order to gain knowledge about the characteristics of pregnancy termination patients, researchers must gather information directly from such patients (Smith, Adler, & Tschann, 1999). Since lack of birth control use and unwanted pregnancy have been associated with dating violence (Rickert, Vaughan & Wiemann, 2002), it seems logical to examine the levels of dating violence and the co-occurring problems in this adolescent population faced with unintended/unwanted pregnancy. Furthermore, the National Association of Social Workers (NASW, 2003) policy statement on reproductive health indicates that social work researchers have a special obligation to this population, because of the profession's devotion to client self-determination.

Purpose/Objectives of Study

The purpose of this study was to evaluate adolescent pregnancy termination patients between 13 and 21 years of age in a reproductive health clinic to assess their levels of dating violence and psychosocial problems. The researcher collected information related to levels of dating violence and the levels of 16 psychosocial life problems in order to construct an exploratory model predicting involvement in dating violence for this population.

The specific objectives of this study are as follows:

1. To identify the reported levels of dating violence in the specified population.
2. To identify the reported levels of depression in the specified population.
3. To identify the reported levels of problems with self-esteem in the specified population.
4. To identify the reported levels of problems with mother in the specified population.
5. To identify the reported levels of problems with father in the specified population.
6. To identify the reported levels of personal stress in the specified population.
7. To identify the reported levels of problems with friends in the specified population.
8. To identify the reported levels of problems in school in the specified population.
9. To identify the reported levels of aggression in the specified population.
10. To identify the reported levels of family relationship problems in the specified population.
11. To identify the reported levels of suicidal thoughts in the specified population.
12. To identify the reported levels of feelings of guilt in the specified population.
13. To identify the reported levels of confused thinking in the specified population.
14. To identify the reported levels of disturbing thoughts in the specified population.
15. To identify the reported levels of memory loss in the specified population.
16. To identify the reported levels of alcohol use in the specified population.
17. To identify the reported levels of drug abuse in the specified population.
18. To determine which of the 16 listed psychosocial life problems are significantly associated with involvement in dating violence in this specified population.

19. To determine, through use of discriminant analysis, whether or not any of these 16 psychosocial problems will predict involvement in lower or higher levels of dating violence.

Research Questions

This study was designed to answer the following research questions:

1. Which, if any, of the 16 psychosocial problems measured by the Multi-problem Adolescent Assessment Scale (MAAS) are significantly associated with dating violence in this at-risk population of adolescent pregnancy termination patients?
2. Can discriminant analysis be used to predict group membership in lower or higher levels of dating violence based on the scores on the 16 psychosocial predictor subscales?

Importance of the Study

There is a real need to assess adolescent dating violence and the co-occurring factors with developmentally appropriate instruments, in young female-only samples, in private settings, while clearly defining with whom the violence occurred. Thus, the topic of this study is psychosocial problems that are associated with dating violence by a co-conceiving partner, in a sample of adolescent pregnancy termination patients. Levels of dating violence and levels of psychosocial life problems are also of interest for informational purposes related to this population.

A thorough understanding of the risk markers related to involvement in dating violence and many populations may result in effective intervention and treatment, thus

modifying the cycle of violence overall (Lewis & Fremouw, 2001). The paucity of research available that directly investigates dating violence in at-risk adolescent populations creates a serious need for dating violence research that examines common behavioral dating violence factors with at-risk adolescent groups (Chase, Treboux & O'Leary, 2002). The research that is available often cannot be generalized to at-risk high school adolescent populations because many studies are conducted with mostly white college students (Rickert, Vaughan & Wiemann, 2002). This current study addresses this need for more information about the problems associated with dating violence in a particularly understudied at-risk population of adolescents: girls who terminate a pregnancy.

This particular at-risk population needs to be included in a dating violence study because other studies have linked unintended pregnancy to adolescent dating violence (Valois, et. al., 1999). However, no dating violence study has ever examined predictive factors associated with dating violence in a sample of adolescents experiencing unintended pregnancy. This study will fill a gap in the literature.

This study also makes another important contribution to the literature in terms of methodology. Most adolescent dating violence studies have been conducted in mixed gender environments in a public classroom. Adolescent females are particularly vulnerable to adolescent male influence in a classroom setting, especially when filling out measures related to their dating relationships (Steiner & Feldman, 1996). The potential presence of a violent male partner in the classroom might influence the adolescent female's responses to a dating violence study conducted in this atmosphere. Another purpose of this current research project is to conduct a dating violence study in an all-

female environment where it may be perceived as "safer" for an adolescent to report real incidences of dating violence. Such settings are intended to provide a study environment where girls do not have to worry about male peers seeing their responses. The researcher hopes that by reducing the influences of adolescent males on females, by conducting the study in an all-female environment, these participants were more likely to report realistic levels of dating violence. This approach is supported by researchers who argue that violence expressed in the lives of adolescent girls is viewed differently compared to boys, and further knowledge is needed in respect to variables related to violence in adolescent girls (Leschied, et. al., 2001). In addition, this study was conducted outside of a school setting, which may have allowed girls more freedom and comfort to reveal their experiences with dating violence.

This study is also important because the measures used in the present study have been specifically designed for use with adolescent subjects. All but a few dating violence studies to date have relied on results obtained from measures that were originally designed for use with adult samples. Such instruments may not be developmentally appropriate for adolescents. Furthermore, the construct of adult domestic violence, as measured by adult instruments, may be very different than the construct of adolescent dating violence. Therefore using an adult domestic violence instrument to measure adolescent dating violence could be viewed as an attempt to measure one construct using a measurement tool designed for a completely different construct.

Reported levels of dating violence vary greatly between empirical dating violence studies. It is often unclear whether there were multiple partners, and if so, which engaged in dating violence. In the present study, the partner in question is specified. This study

reveals specific information about a specific partner: the co-conceiving partner involved in the unwanted pregnancy.

Assumptions and Limitations

There are several assumptions regarding the sampling in this study. The first is that the levels of dating violence reported with the specific partner of the pregnancy will be similar across age groups, as some dating violence researchers have previously found little or no difference between the responses of early, middle and late adolescent age groups.

The use of a pre-experimental research design, known as an ex post facto study design, is a limitation in this study. The study design does not allow for claiming an appropriate level of internal validity related to the outcomes in this study. Thus, the conclusions drawn from this study are open to counter-interpretations, due to the threats to internal validity (Shavelson, 1996). This study presents descriptive information about the possible factors related to dating violence in these participants, but it is still possible that the results from this study are related to phenomena that were not measured.

The lack of a comparison group and use of a convenience sample rather than a true probability sample also makes the study weak in terms of external validity because the data cannot be generalized to other population groups. The generalizability of the study results will be limited to the people that participated in this study.

The use of a sample from only one clinic and the sole use of self-report measures may have resulted in distortions such as under or over reporting of information, so that

participants could present information the way they wanted to be perceived. These factors limit the value of the findings reported in this study.

Due to these limitations, this study is considered an exploratory research effort that aims to provide descriptive data in an area where knowledge is underdeveloped and deserving of further research.

Chapter II- Review of the Literature

Historically, few researchers used high school age adolescents in dating violence studies (Carlson, 1987; Edwards & Moscaritolo, 1989; Roscoe & Callahan, 1985), even though violence has long existed in adolescent relationships. Research efforts with this group may have been impeded initially because it could be difficult to gain research access to adolescents; however, early studies suggested that dating relationships were often based on and sustained by acts of aggression (Carlson, 1987; Cate, et. al., 1982; Henton, et. al., 1983; Makepeace, 1981), which often resulted in serious physical injuries (Carlson, 1987; Simons, Lin & Gordon, 1998; Williams & Martinez, 1999). These results directly contradict the societal perception of carefree teenage dating (Henton, et. al., 1983; Makepeace, 1981). For example, one would never expect Olivia Newton John's character in *Grease* to be physically or sexually abused by John Travolta's character.

Few dating violence research and intervention efforts are implemented outside a school system (Foshee, et. al., 1998, 1996). Most studies involve samples of high school students collected in classrooms within the school day; a few studies involve subjects from a healthcare setting or from a community center setting (Culross, 1999; Sege, et. al., 1996).

At this time, there is a significant body of dating violence literature available, yet conclusions related to dating violence are still unclear in many domains. This literature review outlines results from the existing body of dating violence literature. This review

breaks the current dating violence literature into several areas: methodological issues; age of onset; prevalence; individual, familial and societal risk factors; and an overview of conflict and feminist theory. This review also contains a discussion of the patterns discovered in the literature and a conclusion section.

Methodological Issues

Inappropriate Measurement Tools

Research with adolescent populations is greatly affected by a lack of appropriate measurement tools available to measure abuse in dating relationships (Wolfe, et. al., 2001). There are inconsistent results in samples of adolescents regarding the specific nature and size of the relationship between attitudes about dating aggression and physical aggression against a dating partner. These differences are likely due to a lack of uniformity in measures of dating violence, including specifically, lack of specification of the construct of dating violence (Slep, et. al., 2001).

Many instruments used in adolescent dating violence studies were originally designed to measure marital conflict in adult relationships. The intimate dyads of adolescents differ from adult married dyads in terms of characteristics such as: relationship duration, level of commitment, amount of prior intimate experience, degree of sexual intimacy, social status, and causes/resolutions of conflict (Furman & Wehner, 1997; Laursen & Collins, 1994; Wolfe, et. al., 2001).

The transferability of available scales from adult to adolescent population samples often goes unexamined (Wolfe, et. al., 2001). However, from a developmental perspective, scales designed to measure abuse with adult sample populations may not be

appropriate for examining the characteristics of adolescents (Wolfe, et. al., 2001). Wekerle and Wolfe (1999) argue that there may be problems for teens when interpreting adult instruments and they suggest that adolescent dating violence measures be designed to take the unique nature of adolescent dating violence into consideration.

Adult measures have been used with adolescents to examine conflict in their dating relationships, but few studies mention the reliability and validity of scores collected from the teen populations. Few dating violence assessment instruments have been developed and designed for specific use with adolescent populations (Riggs, 1993). Researchers point out that evaluators often conduct studies using instruments with questionable metric qualities on small study samples (LaVoie, et. al., 1995).

Inconsistent Prevalence Rates

It is clear from the literature that dating violence is present in adolescent samples. However, inconsistency in estimates of the prevalence of teen dating violence makes results unclear and sometimes controversial. Sugarman and Hotling (1989) indicated that different questionnaires produce major differences in victimization and prevalence rates, which vary from as low as 9% to as high as 65% of adolescents reporting involvement in dating violence.

Hamby, Poindexter and Gray-Little (1996) tried to link inconsistent prevalence rates of partner violence to the methodologies used in current studies by examining four measures of partner violence in conjunction with each other. Their results indicated that the measures were strongly correlated with each other, yet were also substantially different from each other in the areas of representation of the construct, and consistency

of classification. Others concluded that non-physical violence and/or less occurring violence is more ambiguous to categorize than physical violence (Slep, et. al., 2001). This could explain why some studies (e.g. Barnes, Greenwood & Sommer, 1991) found little evidence of extreme violence, while other studies (e.g. Molidor & Tolman, 1998) have found alarmingly high rates of extreme violence.

Measuring Levels of Dating Violence

Researchers advise that reliance on a single question or a few questions to measure a complicated construct like adolescent dating violence limits the ability to accurately examine rates of dating abuse (Hamby, Poindexter & Gray-Little, 1996). However, the results reported in many dating violence studies are derived from a single dating violence question such as: Have you ever been a victim of dating violence? Follingstad, Bradley, Laughlin and Burke (1999) purposely used multiple methods to strengthen their dating violence study involving college subjects. They reported finding meaningful distinctions between subjects who used lessor forms of violence and subjects who used serious forms of violence when conducting their study using 11 self-report scales. They indicate this approach was an improvement over previous studies that used one question or one scale to measure a single concept related to dating violence. Research efforts on dating violence still need to be conducted with multiple scales or with one scale that successfully measures multiple concepts (Wolfe, et. al., 2001), such as the Multidimensional Adolescent Assessment Scale, which was used in the current study.

The Conflict Tactics Scale and Other Adult Measures

The most common measure used in the adolescent dating violence literature is Strauss's (1979) *Conflict Tactics Scale* (CTS) (i.e., Riggs, 1993). There are many problems related to using the CTS in teen dating violence studies. The CTS was designed for adults, contains no context for the violence measured, does not allow for distinguishing between acts of aggression and acts of self-defense, only allows for estimates about serious acts of violence, and ignores the clustered nature of violence (Eigenberg & Kappeler, 2001).

One recent study does provide factor structure and convergent validity support for the use of the CTS as an appropriate measure of dating aggression in high school populations (Cascardi, et. al., 1999), but such results are not reported within the adolescent dating violence literature elsewhere.

Other adult measures often used in adolescent dating violence studies are the *Relationship Problem Scale* (RPS) (i.e., Riggs, 1993), which is a set of modified questionnaires based on the CTS (i.e., Henton et al., 1983; O'Keefe, Brockopp & Chew, 1986) and the *Psychological Maltreatment of Women Inventory* (PMWI) (Tolman, 1989). Both measures were designed for use with adults.

Other researchers adapted general violence questionnaires to gain information about dating violence, including: Kreiter and others (1999) who developed a *Vermont Youth Risk Behavior Survey* (VYRBS) from the Centers for Disease Controls *Youth Risk Behavior Survey* (YRBS), Molidor (1995), who adapted the PMWI, and Roscoe & Kelsey, (1986) who adapted an adult scale originally used by Cate and others (1982) to

measure violence in adolescents. Many adolescent dating violence researchers have adapted their questionnaires from the first one used by Makepeace (1981), which was first administered to college students (i.e., Reuterman and Burcky, 1989). Such adaptations often include one or a few questions about dating violence within a broader measure designed to examine a wide variety of violent behaviors.

The CADRI: An Appropriate Dating Violence Measure

Scales containing gender specific questions that measure dating violence in the domains of: psychological abuse, emotional/mental abuse, sexual abuse and the occurrence of general conflict, need to be used to assess adolescent dating violence in at-risk populations (Wolfe, et. al., 2001). The Conflict in Adolescent Dating Relationships Inventory (CADRI) is a newly developed, gender specific scale that is now available to measure adolescent dating violence across such domains (Wolfe, et. al., 2001). The female version of the CADRI was used in the present study.

Adolescent Developmental Insecurity

Personal insecurity about the self increases during adolescence, resulting in conformity to peer values and frequently promoting rigid adherence to sex roles (Steiner & Feldman, 1996). This may explain why Molidor (1995) found that girls might feel at risk and not answer dating violence questions truthfully when males are present during the self-report process. This is why studies of female-only populations in private female-only settings may yield very different results when compared to the results of previous studies conducted in mixed gender school settings.

In addition, association with dating violent peers may also influence reported rates of dating violence. Reuterman and Burcky (1989) indicated that reported association with peers who were involved in dating violence increased the probability that a student would report being involved in dating violence him/herself. Wood, Maforah and Jewkes (1998) indicated that female peers reinforced the acceptance of and submission to dating violence in their sample of South African teens. Such results point to the need for researchers to develop projects that examine the effects of peer influence on reported rates of dating violence in more detail.

Associated Factors

Age of Onset

Early romantic involvement has been associated with higher rates of involvement in dating violence (Makepeace, 1987). Experts indicate that dating violence frequently begins in early to mid adolescence, as most students start dating between ages 14-16 years (Bethke & DeJoy, 1993; Krieter, et. al., 1999; Sigelman, Berry & Wiles, 1984; Wekerle & Wolfe, 1999). These results are consistent with earlier studies indicating that as many as 12.1% of adolescents reported dating violence by age 15 (Henton, et. al., 1983). Burcky, Reuterman and Kopsky (1988) reported that 28.5% of female dating violence victims were between the ages of 12 and 13 years, 40% were between the ages of 14 and 15 years, 28.5% were between the ages of 16 and 17 years, and 2.3% were age 18 or over; 35% of the partners of these girls were over age 18 years. Interestingly, Reuterman and Burcky (1989) examined age of onset and found no statistically significant relationship between rates of dating violence and the age when dating began.

Knowledge related to the relationship between age and onset of dating violence is still unclear.

Prevalence

Researchers have provided extremely dissimilar prevalence rates of adolescent dating violence, raising questions regarding the accuracy of estimates (Lewis & Fremouw, 2001). Rates of adolescent dating violence have varied across studies because of differences in the ages of the samples and because of differences in the types of dating violence being examined (Hanson, 2002). Researchers have found that between 32% and 60% of females reported that they had been victims of dating violence, and around 40% to 50% of boys and girls report perpetration of dating violence (Bergman, 1992; Foshee, 1996; Jezl, Molidor & Wright, 1996; Molidor & Tolman, 1998; Schwartz, O'Leary & Kendziora, 1997). Forty-five percent of female and 43% of male high school students have reported involvement in at least one dating violent incident (O'Keefe & Treister, 1998). Alarmingly, 82 % of girls and 76% of boys in a high school sample reported recently being involved in dating violence that was defined as monopolization, degradation and isolation (Jackson, Cram & Seymour, 2000). Although there is discrepancy in prevalence rates among study results, it is clear that dating violence is a documented prevalent problem that may be occurring at epidemic levels in the lives of modern adolescents.

Gender Differences

Perceptions and Experiences of Dating Violence

Gender differences are shown to be present in prevalence rates, perpetration rates, victimization rates and attitudes related to involvement in adolescent dating violence. Study results do indicate profound differences in the ways high school students perceive and experience dating aggression (Cascardi, et. al., 1999). Females have reported using a wider array of violent tactics, while males have reported using more extreme forms of violence, including sexual violence, multiple times with multiple partners (Lane & Gwartney-Gibbs, 1985). Compared to women, men report viewing restrictive and coercive behavior as less controlling than it actually is (Ehrensaft & Vivian, 1999). Research indicates that girls and boys are equally likely to report reciprocal participation in dating violence, but girls are at much greater risk of sustaining injuries from such encounters (Arias, Samios & O'Leary, 1987; Bookwala, et. al., 1992; Giordano, et. al., 1999; Molidor & Tolman, 1998; Riggs & O'Leary, 1989; Simons, Lin & Gordon, 1998; Wekerle & Wolfe, 1999). Girls have also reported higher rates of abuse in areas such as coercive sexuality and unwanted kissing of sexual body parts, while boys have consistently underreported the perpetration of such abusive acts (Koss, Gideyz & Wisnieweski, 1987; So-Kum Tang, Critelli & Porter, 1995). Researchers in one study revealed that female students were much more likely to report using physical force in dating violence than were male students (Shook, et. al., 2000). The strongest predictor of dating violence for women in one study was the receipt of violence from the male, which indicates that violence expressed by females may often be in the form of self-defense

(Bookwala, et. al., 1992). Earlier data collected from victims of domestic abuse supports such notions of female self-defense strategies (Saunders, 1986).

Early on, Roscoe and Callahan (1985) reported that girls in their study were much more likely to experience dating violence than were boys (65% vs. 35%). Molidor (1995) looked at gender differences in dating violence victimization and found that boys, compared to girls, reported experiencing higher rates of psychological abuse in these areas: (a) being ordered to steal money from others, (b) being sworn at, (c) being given the silent treatment, (d) having affection withheld, (e) having a partner who was insensitive to sexual needs, and (f) being blamed for the partner's problems. Foshee (1996) examined gender differences in detail and found: (a) that girls perpetrate more mild violence when controlling for self-defense, (b) girls perpetrate more violence out of self-defense, (c) boys perpetrate almost all sexual violence, (d) girls sustain more sexual violence and psychological abuse than boys, and (e) girls sustain more injuries from dating violence than boys. Molidor and Tolman (1998) support Foshee's findings as they found that girls in their sample were much more likely to be punched and forced into sexual activity, and boys were more likely to be pinched, slapped, scratched or kicked. They also found that boys report being not hurt at all or hurt only a little by their most severe experience with victimization, whereas girls report being hurt a lot (48% of the time) and seriously physically injured (i.e. bruises and/or needing medical attention) 34% of the time. Seventeen percent of boys in this study reported that girls used violence against them only when responding to sexual advances made by them. Molidor and Tolman (1998) further indicated that boys usually respond to violence perpetrated by girls by laughing at it or ignoring it, while girls reported having to defend themselves

against the violence in 36% of cases. This suggests that many of the acts reported by boys as perpetrated by girls, may in fact be self-defense, as girls reported that boys initiate violence 70% of the time as compared to boys reports of girls' initiation 27% of the time. Other researchers found that, compared to girls, boys were significantly more likely to admit beating up their partners (Giordano, et. al., 1999; Makepeace, 1986).

Mutually Violent Dynamics

This equal perpetration by both genders is a characteristic implied by adult domestic violence research findings, often when the CTS is used to measure the violence. However, this idea that men and women both perpetrate intimate violence equally is result of a faulty misconception created by using the flawed CTS as a measurement tool, rather than proof that a mutually violent dynamic actually exists (Eigenberg & Kappeler, 2001). Because the CTS and the instruments adapted from it produce results that do not distinguish between acts of self-defense and acts of intimate aggression, results from such studies imply an equality of perpetration that is a misrepresentation of the actual level of the intimate violence (Eigenberg & Kappeler, 2001). This is the reason why researchers of adolescent dating violence should collect data using questionnaires that are designed specifically for use with adolescent dating populations.

Despite the limits of the CTS, adolescent dating violence research frequently suggests that adolescent relationships do contain a more mutually violent dynamic than adult domestic relationships. This may be because the developmental period of adolescence is a special stage accompanied by sexual characteristics that are distinctly different from the characteristics of adults (Downs & Hillje, 1993). Wekerle and Wolfe

(1999) assert that a developmental perspective may explain why perpetration rates of dating violence are more equal by gender than perpetration rates of domestic violence. They suggest that a mutually coercive and violent dynamic may form during adolescence when males and females are more equal on a physical level. This physical equality allows girls to assert more power through physical violence than would be possible with a fully physically mature man. Molidor and Tolman (1998) take this into consideration while adhering to feminist theory, which insists that females bear the brunt of adverse effects associated with adolescent dating violence, even if they are also equal perpetrators (Molidor & Tolman, 1998).

Adult Samples

With the absence of information about adolescents on this subject, it is important to point out that LeJeune and LaFollette (1994) found that men are less likely than women to take responsibility for dating violence and more likely to place blame on their partner. Men were also more likely to report alcohol/drug use during violent episodes. Bethke and DeJoy (1993) found that college students viewed violent behavior from men as less acceptable, more injurious and more criminal than violent behavior from women. In a recent study of undergraduates, women reported that they were more frequently the victims of sexual dating violence while men reported that they were more often the victims of psychological dating violence (Harned, 2001).

Precipitating Factors

In regards to reported perceptions of what causes dating violence episodes, Riggs (1993) found that boys most often reported these problems that led them to use dating violence: problems with the girlfriend's parents, problems with her friends, her involvement with other boys, lack of love, and poor sexual relations. Girls in this study reported: personal problems with parents, boyfriend's alcohol/drug use, and verbal dating fights as problems they were concerned would initiate dating violence. He also found that the correlation between dating aggression and conflict was higher for females, suggesting that female aggression in response to a potential dating conflict more often results in use of violence.

Motivation for Participating in Dating Violence

Others examined the motivation of students to participate in dating violence for both perpetrators and victims (Follingstad, et. al., 1999). They found that girls perceived that dating violence was perpetrated against them so that boys could gain control over their actions. In this same study, boys reported using violence in retaliation to being hit first, or in response to feelings of jealousy while girls reported using violence because they were emotionally hurt and angry. This same study examined the perceived effects of dating violence. Girls perceived that boys would think that female on male violence was acceptable. Girls also thought that if they used mild violence on boys, it would result in making boys feel guilty for whatever they had done to emotionally hurt them. Boys thought that male on female violence caused fear, depression and anxiety in the girl. Finally, female victims reported experiencing: fear and anxiety, emotional hurt, and the

need to seek protection as a result of involvement in dating violence (Follingstad, et. al., 1999). Recently, others reported that girls indicate that they are more likely to fight back than boys when confronted with a violent dating situation (Watson, et. al., 2001). This finding seems logical when considering that female victims have an urgent need to defend themselves when faced with dating violence, often in an effort to keep from getting injured or killed.

Recently, frequent marijuana use and earlier onset of drug use were associated with perpetrating greater amounts of dating violence in boys but not girls (Chase, Treboux & O'Leary, 2002).

Effects of Dating Violence

Boys and girls perceive and are affected by dating violence in dramatically different ways. Evidence suggests that girls suffer much more dire consequences than boys when they are victims of dating violence. For example, unwanted pregnancy and the inability to negotiate birth control have been associated with female adolescent involvement in dating violence (Valois, et. al., 1999; Williams & Martinez, 1999). This connection between dating violence and pregnancy has not been examined at length and more research is needed to examine the relationship between dating violence and factors that are unique to adolescent female populations.

Risk Factors Associated with Adolescent Dating Violence

Research on dating violence and the behaviors and problems associated with it is still not well understood, as most studies focus on attitudes and attitude change and not

enough efforts measure behavioral and psychosocial constructs that are associated with dating violence (Hilton, et. al., 1998; Pacifici, Stoolmiller & Nelson, 2001). However, it is often assumed that dating violence behaviors cannot be diminished significantly without appropriate attitude change (Foshee, et. al., 1998; Pacifici, Stoolmiller & Nelson, 2001).

The following section is a review of several studies, which have demonstrated that, to date, risk factors related to adolescent dating violence tend to occur in three domains: individual, familial and societal. These three domains incorporate both the genetic and environmental factors that may influence an adolescent's risk for dating violence. These three domains also incorporate the all the factors recommended for future adolescent dating violence research on at risk groups: antisocial/delinquent factors, present and historical environmental influences, and possible proximal factors (Chase, Treboux & O'Leary, 2002; Loeber, et. al., 1998).

Individual Risk Factors

Conflict Resolution and Aggressiveness

Dysfunctional conflict approaches, personal aggressiveness and tendency towards aggressive acts, have been associated with male propensity to use dating violence as a control tactic. Researchers report that dysfunctional conflict negotiation approaches in males, which include: being disagreeable, being insulting and using inflammatory language, are associated with increased likelihood of involvement in dating violence (Bird, Stith & Schladale, 1991; Riggs & O'Leary, 1996). This is not surprising considering that Billingham and Sack (1986) reported that courtship violence should be

viewed as a breakdown in attempted conflict resolution rather than a phenomenon in and of itself. Because studies of adolescents in this area are limited, it is important to include the work of Ryan (1995), who conducted three studies designed to examine the presence of battering personalities in courtship violent men. He found that previous use of threats, verbal abuse and aggression were most predictive of the use of courtship violence. Later, Ryan (1998) reported that, in men, dating aggressiveness in one category such as verbal aggression, was associated with higher levels of other types of aggression, such as sexual or physical aggression towards a dating partner. His results support findings from another study of males indicating that aggression in one category was related to aggression in another category (Riggs & Caulfield, 1997). Male engagement in hostile talk about women with peers has also been associated with male dating aggression towards women (Capaldi, et. al., 2001).

Perceived Benefits and Acceptance of Dating Violence

Perceived beneficial outcomes have been associated with the use of dating violence in boys (O'Keefe, 1998; Williams & Martinez, 1999). Results indicate that adolescents who were involved in dating violence were more accepting of it and respondents who reported being involved in premarital dating violence also reported more positive attitudes towards marital violence (Foshee, Bauman & Fletcher, 1999; Henton, et. al., 1983). Others report that the need to gain control in a dating relationship, and dissatisfaction with relationship power predict subject involvement in physical and psychological dating abuse (Ronfeldt, Kimerling & Arias, 1998). O'Keefe (1997) found that girls were more likely to be violent to a dating partner when they believed that female to male violence was acceptable and male to female violence was not acceptable.

Bethke and DeJoy (1993) reported that relationship status affected the acceptability of violence, and affected which actions (such as ending the relationship) following a violent episode were viewed as acceptable. Another study demonstrated that negative reactions to receipt of violence were most strongly correlated with the expressed use of dating violence (Bookwala, et. al., 1992). Foshee, Bauman and Fletcher (1999) found that adolescents who were perpetrators of dating violence were more accepting of the use of dating violence, when compared to adolescents who were not perpetrators. To supplement the information on adolescents, it is important to note that Riggs and Caulfield (1997) suggested that violent men were significantly more likely than nonviolent men to believe that violence would result in the winning of an intimate argument. In addition, they found that, as compared to violent men's beliefs, nonviolent men were more likely to believe that the use of violence would bring about a permanent end to the relationship.

Status and Duration of Relationship

The status and length of the dating relationship and number of dating experiences may affect the likelihood of involvement in violence for adolescents. Some study results suggest that up to 35% of violence occurred in short term relationships of less than six months (Bergman, 1992; Roscoe & Callahan, 1985), as compared to six percent of violence, which occurred in relationships of two years or more (Roscoe & Callahan, 1985). Another study suggested that longer relationships have an increased likelihood of violence (O'Keefe, 1997). Reuterman and Burcky (1989) found that adolescents who experienced dating violence reported a higher number of dating experiences. Results from another study indicate that different scoring methods to measure dating violence

need to be used for males, depending on dating status (Cascardi, et. al., 1999). Females in the same study did not require scoring adjustments based on dating status. Others indicate that teens tend to minimize or rationalize severe abuse in relationships that are defined as more serious (Becky & Farren, 1997).

Pregnancy

Involvement in sexual dating violence has been associated with involvement in other risk factors that often result in unwanted pregnancy: disagreements about sex and sexual activity, alcohol use before sexual encounter, forced sexual contact, increased sexual activity and number of partners, and number of times previously getting someone pregnant (Bergman, 1992; Carlson, 1987; Burcky, Reuterman & Kopsky, 1988; Krieter, et. al., 1999; Molidor & Tolman, 1998; Valois, et. al., 1999; Williams & Martinez, 1999). The present study measured involvement in a variety of psychosocial risk factors to determine which of these factors may be associated with dating violence in pregnant adolescents who chose termination.

Although no dating violence study to date has been conducted with pregnant adolescent women, one study has examined child abuse potential (pCAP) scores along with pregnancy outcomes in adolescent expectant mothers (Zelenko, 2001). Results indicated that women with higher pCAP scores were more likely to be involved with risky behaviors such as smoking and drug use during pregnancy.

Health Risks

It has also been reported that adolescent involvement in dating violence is a predictor of increased number of sexual partners and involvement in other serious health risk behaviors (Valois, et. al., 1999). In addition to straightforward mental, emotional and

physical health effects, dating violence against women limits their ability to protect themselves against sexually transmitted diseases, unwanted pregnancy, and undesired sexual intercourse, while increasing their risk for acquiring AIDS/HIV and other sexually transmitted diseases (Valois, et. al., 1999; Wood, Maforah & Jewkes, 1998).

Self-Esteem Problems

The most commonly explored problem associated with dating violence in research studies is the risk of low self-esteem. Early on, O'Keefe, Brockopp and Chew (1986) maintained that ongoing violence in dating relationships destroys adolescents' self-esteem. Low self-esteem has been found to be a predictor of involvement in dating violence (Burke, Stets & Pirog-Good, 1988; O'Keefe, 1998; Sharpe & Taylor, 1999; Stets & Pirog-Good, 1987). When controlling for length of relationship, self-esteem was found to be significantly associated with physical dating violence in a sample of undergraduates in Nova Scotia (Sharpe & Taylor, 1999). It was also reported that self-esteem was associated with physical and psychological violence for females in this same study. Recently, youths who reported experiencing date violence and rape also reported lower levels of self-esteem (Ackard & Neumark-Sztainer, 2002). Previous study results indicated that involvement in dating violence caused diminishment in self-esteem (Kasian & Painter, 1992). On the other hand, at least two studies have found that self-esteem is not related to involvement in dating violence (Bird, Stith & Schladale 1991; Makepeace, 1981). Due to inconsistent findings involving self-esteem and dating violence, researchers need to include measures of self-esteem in future studies to try and draw some stronger conclusions about the relationships between self-esteem and dating violence.

Mental Health Indicators/Disorders

There is some evidence that suggests that mental health disorders, such as anti-social personality disorder, depression, suicide risk and post-traumatic stress disorder may play a role in adolescent involvement in dating violence. The relationship between mental health indicators and adolescent dating violence has not been explored at length (Williams & Martinez, 1999). Criminologists suggest that delinquent behavior as a child increases the likelihood of involvement in other delinquent behavior, including dating violence, as an adolescent (Giordano, et. al., 1999). Deviant peer association and later aggression towards a partner was found to be mediated by antisocial behavior in one study (Capaldi, et. al., 2001). Other results suggest a significant association between dating violence, psychopathology and physical aggression in young couples (Andrews, et. al., 2000). Dating violent females were recently reported to have more internalizing symptoms such as withdrawal, anxiety and depression symptoms as compared to non dating violent females (Chase, Treboux & O'Leary, 2002). Other findings indicate that posttraumatic stress symptoms accounted for the relationship between childhood maltreatment and dating violence across school samples (Wekerle, et. al., 2001). Findings from one study indicate that dating violence was associated with higher levels of serious disordered eating behaviors (Ackard & Neumark-Sztainer, 2002). In the same study over 50% of girls and boys who experienced dating violence and date rape also reported suicide attempts and scored lower on measures of emotional well-being when compared to non dating violent peers. Females who reported dating violence were more likely than those who did not report such involvement to have attempted suicide according to Kreiter and colleagues (1999). Boys with a history of childhood maltreatment were more likely

than boys without a maltreatment history to report clinical levels of depression, posttraumatic stress and overt dissociation and also had a greater risk of using threatening behaviors and physical abuse against a dating partner (Wolfe, Scott, Wekerle & Pittman, 2001). Because the relationship between dating violence and mental health indicators is still unclear, thus indicating a tremendous need for further research, several mental health indicators were examined in this current dating violence study.

Lack of School Success

Lack of success in school has been associated with the likelihood of involvement in dating violence. Bergman (1992) found a relationship between lower high school grade point average and involvement in dating violence. Reuterman and Burcky (1989) found that high school subjects involved in date fighting were more likely to have been suspended or expelled from school, and were more likely to be following a general high school academic program, rather than a college preparatory academic program. Because the relationship between dating violence and school problems is still unclear, problems with school were measured in this current study.

This examination of the literature related to the personal situational factors associated with dating violence indicates that the relationship between dating violence and problems with self-esteem and various mental health indicators needs to be explored in greater depth. Thus, this current study examined self-esteem and other mental health indicators as possible predictors of dating violence in this population.

Familial Factors

Violence and Abuse in the Family of Origin

Dysfunctional early family involvement has been identified as a predictor of dysfunctional couple functioning in one recent study (Andrews, et. al., 2000). Dating violence may be a continuation of violence adolescents are reared with, as adolescents who grew up exposed to violence in the home may become desensitized to it (Williams & Martinez, 1999). Research demonstrates that experience with violence in the family of origin may increase adolescent involvement in violent dating relationships and/or model how to interact violently in intimate relationships (Carlson, 1987; Foshee, Bauman & Fletcher, 1999; Gwartney-Gibbs, Stockard & Bohmer, 1987; O'Keefe, Brockopp & Chew, 1986; Simons, Lin & Gordon, 1998; Smith & Williams, 1992). In one of the earlier studies of adolescent dating violence, Roscoe and Callahan (1985) found that 59% of adolescents who reported involvement in dating violence also reported violent treatment in their families of origin. O'Keefe (1998) found evidence that high school students who witnessed violence in the family of origin were more likely to be involved in dating violence either as victims or perpetrators, although not all of the students in her sample were violent with dating partners. Riggs and O'Leary (1996) found that dating aggression was associated with exposure to violence in the family of origin for female college students but not for males. In another study, subjects with violent family backgrounds reported experiencing more aggressive conflict in their dating relationships than subjects who did not have violent family backgrounds (Duggan, O'Brien & Kennedy, 2001). Some studies have failed to find that parental violence is a factor in teen

dating violence (Riggs & O'Leary, 1996; Sigleman, Berry & Wiles, 1984; Simons, Lin & Gordon, 1998).

Some authors suggest that previous experience of child abuse/maltreatment may contribute to adolescent involvement in dating violence (O'Keefe, 1998; Wekerle & Wolfe, 1999). Parent-child violence has been shown as one predictor of the use of courtship violence with females but not with males (Tontodonato & Crew, 1992). Wolfe, Wekerle, Reitzel-Jaffe, and LeFebvre (1998) reported that youths who are maltreated prior to age 12 have significantly more verbal and physical conflicts with dating partners than non-maltreated youths in their sample of over 300 15-year olds. Results from another study indicate that dating violence can be predicted by childhood maltreatment across high school samples with both genders (Wekerle, et. al., 2001). Other researchers have discovered consistent findings (Marshall & Rose, 1988; Riggs, O'Leary & Breslin, 1990).

Interpersonal Problems with Parents

Problems with parents have been associated with dating violence involvement in a recent study of adolescents. Dating violent females were more likely to report that their parents were less involved in their lives, less open with decision making and less concerned about their well-being and whereabouts when compared to non-dating violent females, while males did not perceive their parenting to be any different (Chase, Treboux & O'Leary, 2002).

Simons, Lin and Gordon (1998) examined criminology literature and suggested that adolescent dating violence may be a manifestation of anti-social tendencies, which develop in childhood, often as a result of anti-social parents with ineffective parenting

strategies. The results of their 3-year longitudinal survey of parents and adolescents in 3 counties provided strong evidence in support of their hypothesis. Experts have found evidence that unskilled parenting and family instability mediated the development of anti-social behavior, which played an important role in use of dating violence with an intimate partner in adolescence (Capaldi & Clarke, 1998; Wekerle & Wolfe, 1999).

Corporal Punishment

Harsh corporal punishment in the family of origin has also been associated with dating violence in adolescents (Foshee, Bauman & Fletcher, 1999; O'Leary, et. al., 1989; Strauss & Smith, 1990; Simons, Lin & Gordon, 1998). Reuterman and Burcky (1989) found that adolescents who had experienced dating violence were more likely than others to report that their parents had used various forms of violence as a means of disciplining them. Harsh discipline from a father was particularly predictive of involvement in dating violence, and those involved in dating violence were less likely than others to report close relationships with their fathers. They also found that being hit by a mother was not associated with the perpetration of dating violence for females, but was associated for males. In another study, being hit by a father was positively associated with dating violence for either gender (Foshee, Bauman & Fletcher, 1999).

Divorce

One study suggests that divorce in the family of origin may contribute to use of dating violence during adolescence. Billingham and Notebaert (1993) reported that students who come from a divorced family report higher scores of violent behavior on the Violence subscale and they also report higher scores for their dating partners on both the Violence subscale and the Verbal Aggression scale.

Societal Factors

Violence in Schools and Communities

Adolescents are often exposed to violence in their schools and communities (Krieter, et. al., 1999), which appears to play a role in dating violence involvement (Williams & Martinez, 1999; O'Keefe, 1998; Bergman, 1992), particularly when coupled with the stressor of violence within the family of origin (O'Keefe, 1998). Malik, Sorenson and Aneshensel (1997) found, in their study of over 700 high school students, that weapon ownership, coupled with injuries resulting from community violence were associated with higher rates of student involvement in dating violence. They concluded that, for high school students, being exposed to violence in one context, such as the community of origin, appears to have crossover effects related to victimization and perpetration in another context, such as involvement in dating violence. Another study suggested that girls who grow up in neighborhoods where more female on female fighting takes place may be more prone towards other delinquent acts, such as participation in and acceptance of dating violence (Giordano, et. al., 1999). In other words, teen violence in one context may result in violence in other contexts.

Socioeconomic Status

O'Keefe (1998) found that male adolescent involvement in dating violence was mediated by lower socioeconomic status. This supports the findings of a later study suggesting that women reared in economically depressed areas might be more prone to engage in dating violence (Giordano, et. al., 1999). Others found that subjects who experienced dating violence were more likely to live in rural areas (Reuterman & Burcky,

1989). Perhaps the economic stressors often associated with rural living are somehow associated with higher rates of dating violence in rural areas.

Pop Culture

Pop culture may encourage dating violence in adolescents (Bergman, 1992). Teens are often exposed to music and media that perpetuate the use of violence against women as acceptable and sometimes expected. Results reported from 60 African-American boys and girls ranging in age from 11-16 years suggested significant acceptance of violence against women present in the adolescents who were exposed to rap music videos depicting male on female violence (Johnson, et. al., 1995).

Peer Influences

Personal insecurity about the self increases during adolescence, resulting in conformity to peer values and frequently promoting rigid adherence to sex roles (Steiner & Feldman, 1996). Since peer acceptance and peer pressure appear to play a role in influencing adolescent experiences, it likely influences adolescent involvement in dating violence. Reuterman and Burcky (1989) found that reported association with peers who were involved in dating violence increased the probability that a student would report being involved in dating violence him/herself. Wood, Maforah and Jewkes (1998) reported that female peers reinforced the acceptance of and submission to dating violence in their sample of South African teens.

Theory

Conflict Theory

A few studies have indicated that dating violence may be a result of learned dysfunctional conflict resolution skills. Conflict theory is used to describe and account for conflict between dating partners (Winton, 1995). The premise of conflict theory indicates that conflict in relationships is inevitable, as there are resources in relationships that are unevenly distributed (Winton, 1995). Conflict occurs when individuals in relationships attempt to gain control over resources in order to gain power. In a dating relationship, if a person threatens another with intense conflict, the threat can generate fear and result in submissiveness as a response to conflict (Winton, 1995). When applied to relationships, conflict theory views violence in the context of power (Winton, 1995). It seems that dysfunctional conflict approaches could play a significant role in adolescent dating violence. If problems resulting from inappropriately managed aggression and conflict lead to dating violence, then it might be primarily prevented through healthy handling of conflict and aggression before dysfunctional problem solving results in violence. For this reason, it is important to examine the different domains of conflict and abuse in dating violence studies with adolescents. The present study does measure many dimensions of dating conflicts using a new scale that was designed specifically for this purpose.

Collins (1975) was one of the first to apply conflict theory to romantic love relationships. He maintained that the resources that cause conflict in romantic love relationships may be diverse and can include such things as money, social standing,

beauty and sexual favors. Conflict theory has also been used in context with domestic violence. From this framework, domestic violence is a situation where conflict is dysfunctional (Winton, 1995) and is directed not at negotiating problem solving but for maintaining control. Dating violence, like domestic violence could be viewed as another type of domestic dysfunctional conflict that results in control of the victim (Winton, 1995). Conflict theory, then, could be viewed as an appropriate theory to use as a tool to guide the development of research in the area of adolescent dating violence.

Feminist Theory

Combining feminist theory with conflict theory may provide a better framework for analyzing dating violence. Many who adhere to feminist theory already base some of their perspectives on modern conflict theory. Power and inequity are essential components of both conflict and feminist theory (Winton, 1995). Thus, many feminist theorists today could also describe themselves as conflict theorists (Winton, 1995). Regarding intimate violence, feminist theory seeks to change the status quo by promoting social change to enhance the status and political power of women in all social systems, so they can achieve equality and autonomy (Winton, 1995). The feminist approach to dating violence would support a change in the social structure surrounding interpersonal dating relationships in a way that equalizes the power of women in dating relationships. Such a change should also, according to conflict theory, eliminate the misappropriation of resources that causes the dysfunctional and injurious conflict. When equality is achieved, then violence as a means of gaining power through conflict in dating relationships would not be necessary. A better understanding of the psychosocial problems associated with

dating violence could provide the knowledge necessary for practitioners to help adolescents begin to equalize the power in dating relationships and thus reduce the occurrence of adolescent dating violence. Gray (1991) indicates that, in regards to family violence, taking a feminist perspective in social work requires constantly exploring conflict present in the lives of the women in many and previously unexplored contexts, just as this current study has done.

Theorists with a feminist approach to the dating violence problem emphasize the importance of the existing patriarchal social structure (Avery-Leaf, et. al., 1997; Molidor & Tolman, 1998), which permits the acceptance of and promotes the occurrence of dating violence in adolescents. This sociological perspective emphasizes the relationship between gender based power differentials in society, which leads to male abuse of power in intimate relationships (Avery-Leaf, et. al., 1997) at all levels. Many researchers challenge this perspective, as they claim that it fails to explain the high documented rates of female perpetration (Avery-Leaf et. al., 1997) found in many dating violence studies.

The feminist perspective, however, does take female perpetration into account. From a feminist perspective, the high rates of female dating violence perpetration could be explained as girls' retaliation and attempts to regain the power that has been wrested from them via perpetration of psychological, emotional and/or physical dating violence. This response is allowed to occur at this particular developmental stage because males have not yet achieved their full allocation of resources, including their full physical maturity, which allows abuse of a female partner to be perpetrated with less effort in adulthood.

Conclusions from the Literature

Based on the findings in this literature review, interventions need to be incorporated into school curriculums as early as kindergarten, in order to achieve true primary prevention of intimate dating violence. Putting off relationship interventions until middle and high school, after puberty, when dating relationships have begun to form is ineffective (Levesque, 2000) and allows dating violence to flourish. Researchers suggest that dating violence may be a precursor to marital violence (Bergman, 1992; Carlson, 1987; Simons, Lin & Gordon, 1998). More research is needed to determine the extent of the link between dating violence and domestic violence. If it is found that dating violence is truly a precursor to adult domestic violence, then the problem of dating violence has lifetime risk implications to the future well being of families. For instance, Carlson (1987) found that many students who reported involvement in dating violence remained in such relationships and had been involved in multiple violent relationships. Others found that adult women in violent domestic situations reported that the violence began during courtship (Kelly & Loesch, 1983; Roscoe & Benaske, 1985). According to Wekerle and Wolfe (1999) professionals designing interventions should consider the period of adolescence as a window of opportunity to interrupt the violent cycle before it leads to an ingrained pattern of behavior of domestic male to female abuse in adulthood.

This literature supports the need for gender specific dating violence interventions that can target the special needs of each gender. Based on identified patterns present in the dating violence literature, it is clear that attitudes and behaviors related to adolescent dating violence vary dramatically by gender. Girls need to know how to identify dating

violent behaviors for what they are. Girls in these studies often interpret violent, controlling acts as signs of love. This can be explained by the sociological perspective, suggesting girls are socialized by our culture to associate love and violence (Andersen, 2000). For this reason, social work researchers need to focus on finding out how dating violence interventions can be used to: change girls attitudes of acceptance of dating violence, educate girls to identify violent dating behavior, educate girls to set boundaries in dating relationships, equip them with the skills necessary to exit violent relationships, and equip them with skills necessary to utilize appropriate support services available for victims.

This literature suggests that girls perpetrate mild to moderate acts of violence almost as often as boys do. Much of this is done in self-defense. Although their perpetration is not as likely to result in serious injury, violent acts not perpetrated in self-defense are still harmful and unacceptable, as such acts may be psychologically damaging to the victim and may elicit more serious violence in retaliation. Girls reportedly believe that it is acceptable to slap or throw things at boys even though they believe boys should not use violence upon them. Social work researchers need to focus on finding out how gender specific dating violence interventions can be used to change these attitudes and behaviors, as well.

This literature suggests that boys have a greater tendency to believe that sexual coercion is an acceptable way to gain sexual favors. Boys are more likely to believe that dating partners owe them sexual favors if the relationship is long term, if they have spent money on the girl, or if the girl has given the boy sexual favors in the past (Molidor & Tolman, 1998). Once again, from a sociological perspective, boys tend to be socialized to

believe that these sexist myths are truth (Andersen, 2000). Most efforts to change battering behavior focus on men who already batter, later in the life cycle (Molidor & Tolman, 1998). However, research demonstrates that males begin controlling and abusive behavior early in life (Molidor & Tolman, 1998). Programs specifically targeted towards boys should focus on changing the culture of dating and should begin in kindergarten. Social work researchers must concentrate on developing these dating violence interventions at developmentally appropriate levels for each grade.

According to the literature, both genders tend to be at higher risk for involvement in dating violence when abusing drugs and alcohol. This repeated finding points to the need to explore the possibility that dating violence interventions need to include a substance abuse component. Boys need to know that they are still expected to respect boundaries even if intoxicated. Boys must understand that, legally, a date who is intoxicated is not able to give consent to participate in sexual activity. In addition, intoxicated boys are still responsible for their behavior and can be criminally prosecuted for violent behavior. Although much research has been conducted on how to provide effective substance abuse interventions, we still do not know which methods are most appropriate for effectively addressing this dating violence with substance abusing adolescents. Social work research efforts need to generate information about how best to combine dating violence and substance abuse interventions that will move the field closer to the goal of prevention of dating violence in adolescents.

Incidences of adolescent dating violence typically are underreported (Bergman, 1992; Molidor & Tolman, 1998; Wekerle & Wolfe, 1999), thus possibly leading to adverse effects due to lack of counseling and medical care for emotional and physical

injuries. Research indicates that adolescents only report dating violence to an authority figure in six percent of cases (Molidor & Tolman, 1998). Therefore, adults do not get a chance to intervene or provide support in dating violent situations. Furthermore, adolescents involved in dating violence often continue to stay in the relationship (Carlson, 1987), thus possibly leading to more mental and physical injuries. Bergman (1992) found that 57% of students in her sample continued to date a partner who had perpetrated sexual violence. Research efforts need to generate information about how best to encourage adolescents to report their involvement in dating violence to adults who can assist them with access to services and help them terminate violent relationships, or seek police and legal interventions when termination efforts fail. Research efforts need to be directed at determining how best to increase the availability of adolescent victim and offender services so that students involved in violent relationships can feel free to seek help. Students should be allowed to use such services without seeking parental consent, as they may be too embarrassed or scared to inform their parents of this problem.

This literature provides evidence of the concrete physical, emotional, family and health related impacts that the prevalence of adolescent dating violence is having on our society today. Thus, it is imperative that social work research projects generate information that can be used to develop empirical interventions, which equip these teenagers with the ability to eliminate dating violence from their lives themselves. Finally, research efforts must concentrate on finding out how to best provide educational information on appropriate peer responses to dating violence. Evidence suggests that if teens tell anyone about violence it is their peers, and that inappropriate peer responses

may encourage students to remain in violent relationships (Molidor & Tolman, 1998; Wood, Mafora & Jewkes, 1998).

Patterns in the literature indicate that reported rates of victimization do not match rates of reported perpetration. Reasons for this may include: perpetrators do not consider their behavior unacceptable or violent, victims are dating older/younger perpetrators not included in the study results, and perpetrators do not honestly report their acts of dating violence. One way to address these issues might be to conduct dating violence studies on matched couples. This has been previously suggested but to this point no research project has been designed with this goal in mind.

The following conclusions were drawn from this review of the literature that were used to develop this present study:

1. Dating violence occurs frequently in adolescent populations.
2. Adolescent dating violence can have detrimental effects on males and females.
3. Female adolescents appear to suffer the most detrimental effects when involved in dating violence.
4. More research is needed on adolescent dating violence and at-risk youth.
5. More research is needed related to the contextual factors that co-occur with and predict adolescent dating violence.
6. More gender sensitive research measures need to be employed in the study of adolescent dating violence.
7. Conflict and feminist theory may help to explain why adolescent dating violence occurs.

This current study was designed to take these conclusions from the literature into account. For instance, the MAAS was selected specifically because it allowed the researcher to measure many of the individual, family and societal contextual factors that have been identified in the dating violence literature, using only one measurement tool. Further, this dating violence study only examined females, to cut down on the possible response bias that might be caused by conducting dating violence studies in mixed gender settings. Participants were asked to complete their studies in private settings where males were not present. The researcher is hopeful that this type of setting encouraged respondents to answer the questions more accurately, thus offering descriptive insight into a misunderstood social problem.

CHAPTER III- METHODS AND PROCEDURES

Methodology

Despite advances in the study of adolescent dating violence, few studies focus on at risk youth, and there are no dating violence studies involving adolescent women who terminate a pregnancy. The limited research that is available on dating violence and at-risk youth mostly focuses on measuring attitudes related to dating violence, while no study to date examines a variety of psychosocial problems and their relationship to involvement in dating violence.

The first purpose of this study was to evaluate which, if any, of the 16 psychosocial problems measured by the MAAS were significantly associated with dating violence in this at-risk population of adolescent girls who terminate a pregnancy. The second purpose of this study was to examine which psychosocial problems measured by the MAAS predict involvement in lower levels of dating violence and which psychosocial problems predict involvement in higher levels of dating violence.

Study Sample

Subjects consisted of a sample of 120 never married adolescent women who presented for a pregnancy termination appointment at a local family planning clinic. All never married women who met inclusion criteria during the duration of the study, and presented for a pregnancy termination appointment at this clinic, were informed about the study and asked to voluntarily participate.

Inclusion and Exclusion Criteria

Inclusion criteria: participants were never married women, ages 14-21 years who were pregnancy termination patients with appropriate levels of psychological stability. Exclusion Criteria: Patients who appeared to be emotionally distressed, as determined after intake by a BSSW or MSSW level health counselor, were not asked to participate in the study. Patients who were known victims of sexual molestation or rape cases involving law enforcement were not asked to participate in the study. These limitations were in place to protect vulnerable patients from further distress.

Consent

Participant consents were obtained for women age 18 and above. Participant assents and parental/guardian consents were obtained for women age 14 through 17. Parental/guardian consent was obtained from the parent or guardian who accompanied the underage participant to the clinic for her appointment, as required by state law in Tennessee.

Throughout the study, all participants and their parents/guardians were assured of complete confidentiality regarding study participation and presence at the clinic. Once patients completed and sealed their study packets and placed them in the box, there was no way for the researcher to go back and identify who completed which packet. Participants in this study were placed at minimal risk. Approval for research with human subjects was obtained from the Human Subjects Review Board at the University of Tennessee, Knoxville.

Duration

The participants were screened if they appeared in the clinic from May 2002 through September 2002. One hundred and twenty completed packets were collected during this time. Clinic staff that administered the surveys neglected to keep track of refusal rates; therefore it is impossible to determine response rates with any accuracy.

Type of Sample

The sample in this study was a convenience, or purposive sample. Subjects were drawn from a random group of patients who came in for a pregnancy termination appointment during the duration of the study, until 120 survey packets had been completed.

Study Design

This study was a cross sectional, retrospective, self-report survey study. This can be described as a "one shot group study design" (Campbell & Stanley, 1963), employed to evaluate and describe the levels of dating violence and psychosocial life problems in a sample of adolescent pregnancy termination patients. No control group was used in this design, as this is a preliminary or exploratory study to be used in the description of adolescent dating violence in a group of pregnancy termination patients.

Data Collection Procedures

Definition of Terms

The terms used in this study are operationally defined as follows:

Adolescents- individuals in the second decade of life ranging in age from early (10-13 years), middle (14-17 years) and late (18-21 years) adolescence (Steiner & Feldman, 1996, p.3).

Adolescent pregnant women – women and girls who have become pregnant and are between the ages of 14 to 21 years.

Co-conceiving partner- male sexual partner of the participant, who fathered the unwanted pregnancy.

Dating Violence - perpetuation of, or threat of, an act of violence by at least one member of an unmarried dyad on the other within the context of the dating process (Sugarman & Hotling, 1989). There are four primary factors thought to comprise the entity of dating violence*: physical violence, sexual violence, emotional/verbal violence* and *threatening behavior* (Wolfe, et. al., 2001).

Demographic variables: characteristics of the participant used to describe characteristics of the sample: *participant age, religious preference*.

Dating history demographic variables- characteristics of the participants dating history used to describe characteristics of the sample: *age participants began dating, age at first intercourse, partner age, mean number of previous pregnancies*.

Psychosocial life problems- one of the 16 areas pertinent to the psychological or social functioning of adolescents and measured by the Multidimensional Adolescent Assessment Scale (MAAS). The following 16 psychosocial problems were measured in this study: *depression, self-esteem, problems with mother, problems with father, personal stress, problems with friends, problems with school, aggression, family relationship problems, suicidal thoughts, feelings of guilt, confused thinking, disturbing thoughts, memory loss, alcohol use,* and *drug use*.

Instrumentation

Two demographic questionnaires and two standardized assessment instruments (see Appendices) delineated in the following paragraphs were administered to all participants during one session on an individual basis. The measures were given in the same order as indicated below and were administered to all participants in the same manner.

Demographic Information Sheet

Demographic information was gathered using a questionnaire that was attached at the front of the measurement package. This form was developed by the researcher, in compliance with a clinic administration request, to gather demographic information about the patients who participated in this study. This form contained 8 items and requested information regarding: age; race; education; religious preference; number of previous pregnancies; and whether or not the participant was a smoker, had a psychiatric history, and/or had a history of sexually transmitted diseases.

The clinic administration allowed the researcher to use information from this sheet as demographic variables for this study. The following demographic variables used in this study were derived from the demographic information sheet: participant age (AGE), and religious preference (RELIG2, O= religious, 1 = not religious).

Dating History Questionnaire

Individual dating history questionnaires followed the demographic information sheet. This 24-question form was developed by the researcher and was used to collect dating history information that could be used as control variables for this study. Some dating questions were included at the request of the clinic, as clinic staff wished to gain knowledge of their patients in hopes of improving patient services based upon such knowledge. Some of these questions were not included in the analysis for this research project and such questions remain property of the clinic.

The following control variables were derived from the dating history information sheet: age participant began dating (AGEBEGAN), age of partner (PARTAGE) and age at first intercourse (FIRST), and the number of previous pregnancies (PREVIOUS).

Conflict in Adolescent Dating Relationships Inventory

Researchers have indicated the importance of assessing physical and psychological dating aggression in adolescent dating violence studies (Sharpe & Taylor, 1998). The *Conflict in Adolescent Relationships Inventory* (CADRI) was chosen to measure levels of dating violence in this study because the CADRI measures several different dimensions of dating violence. In the present study, levels of dating violence were measured using the *Conflict in Adolescent Relationships Inventory,* (CADRI) *Female Version,* a self-report, self-administered dating violence perpetration and

victimization scale developed by David Wolfe, Ph.D. Participants were asked to think only about their relationship with the co-conceiving partner when they filled out the CADRI for the present study.

Scoring

Each of the 35 questions on the CADRI contains 2 sections (a and b) that ask the same question two different ways. The first section of the question is related to perpetration of dating violence. The second section of the question is related to victimization of dating violence. Each a and b item is scored on a Likert type scale from 1-4, with 1 meaning that a behavior never occurred and 4 meaning that the behavior often occurred (1= Never, 2=Seldom, 3=Sometimes, and 4=Often). Each two-part question can be worth a score ranging from 2-8 points. Higher scores on the CADRI indicate more involvement in the dating violent behavior while lower scores on the CADRI indicate less involvement in dating violence. In accordance with scoring procedures recommended by Wolfe and others (2001) the numerical scores of the CADRI are to be combined to establish an overall abuse score. The total score on the CADRI can range from 70-280. For the purposes of this study, scores considered low range between 70-113.5, and scores considered high would be anything at 113.6 or above.

Development of the Scale

The CADRI was developed to fill a need for an appropriate measure of dating violence for use with adolescents. This scale captures ‘abuse’ in terms of 4 principal factors or domains: physical abuse, threatening, sexual abuse, and verbal/emotional abuse. Male and female versions are identical except for pronoun changes. Exploratory factor analyses methods indicate an abusiveness factor is present in all abuse related

items and that items represent all of the intended facets of abuse (physical, sexual, emotional, threatening) (Wolfe, et. al., 2001). This scale also includes 10 conflict resolution items to include positive response options. This scale is based on a model suggesting that abuse in adolescent relationships is a single dimension composed of four related expressions of abuse (Wolfe, et. al., 2001). Implied alpha reliabilities of the subscales of this model were found to be strong (Wolfe, et. al., 2001).

Reliability and Validity

Internal consistency measures were strong, and test/retest reliability measures were adequate for the subscales (Wolfe, et. al., 2001).

Population Information

This scale was developed for use with and normed on adolescent populations.

Limitations of this Measure

Limitations typically associated with self-report measures are compounded by the influence of adolescent interpretation of the questions (Wolfe, et. al., 2001). Males and females may interpret the behaviors that are being measured in different ways (Wolfe, et. al., 2001). Clarification of the context of the conflict in relation to answering the question is essential in the successful administration of this measure (Wolfe, et. al., 2001). In this present study, we have clarified that the conflict is confined to the co-conceiving partner. Administration in a confidential and anonymous environment is also essential in relation to this study (Wolfe, et. al., 2001). The requirements of privacy were met in this present study, as it was only administered in a secluded setting away from all friends and family members. The CADRI was used to gather a total score for dating violence, which served as the main dependent variable for this study.

Multidimensional Adolescent Assessment Scale

Dating violence researchers are called to include more behavioral measures as predictors of causal pathways in their future studies (Pacifici, Stoolmiller & Nelson, 2001). The *Multidimensional Adolescent Assessment Scale* (MAAS) was selected for use in this study because it measures many of the problem behaviors that were found to be associated with dating violence across many previous studies. The MAAS allows for the measurement of 16 psychosocial problem factors using one measurement tool. Many of these factors have been reported as significant in different studies, yet all of them need further empirical exploration to determine their relationship to dating violence.

Various psychosocial life problems were measured with the MAAS, a scaled down version of the longer and more detailed *Multi-Problem Screening Inventory* (MPSI), which was developed for use with adults ages 12 and above. The MPSI is a problem focused assessment tool and a collection of 27 short-form summated rating scales (Nugent, Sieppert & Hudson, 2001). It is best designed to gather information about areas of improvement in clinical settings and can be used to gather a great deal of information about personal functioning in a limited amount of time (Nugent, Sieppert & Hudson, 2001). The MAAS was adapted from the MPSI specifically for use with adolescents. This is a self-administered, self-report scale made up of 16 of the 27 MPSI subscales designed to measure a range of involvement in psychosocial life problems that are pertinent to adolescents.

Multiple copies of the MPSI were available for use through a member of the dissertation committee. In order to make the MPSI into the MAAS, participants were only asked to answer the subscale sections that appear identically in the MAAS. The

MAAS consists of the following subscales from the MPSI: depression (DEP), self-esteem (SE), problems with mother (MOM), problems with father (DAD), personal stress (STRESS), problems with friends (FRIENDS), problems with school (SCHOOL), aggression (AGG), family relationship problems (FAMILY), suicidal thoughts (SUICIDE), feelings of guilt (GUILT), confused thinking (THINK), disturbing thoughts (THOUGHTS), memory loss (LOSS), alcohol use (ALCOHOL), and drug abuse (DRUG). There were a total of 177 items on this questionnaire. The overall score from each subscale was entered for each participant; each of the 16 problems served as one IV in this study.

Administration

The MPSI and MAAS can be administered either through structured or unstructured administration (Nugent, Sieppert & Hudson, 2001). Unstructured administration requires only that the participant be given the measure to complete, after getting minimal instruction (Nugent, Sieppert & Hudson, 2001). Unstructured administration was used in this current study.

Scoring

Each subscale on the MAAS contains between 7 and 20 Likert-style items and each is scored on a category partition ranging from 1 to 7 (Nugent, Sieppert & Hudson, 2001). The items on each subscale were specifically developed with three reasons in mind: desire to produce acceptable reliability estimates for subscale scores, desire to keep subscales short to reduce participant fatigue, and desire to make the scoring simple and quick (Nugent, Sieppert & Hudson, 2001). Items include the option of an X if participants wish to indicate that the question does not apply to them. Participants were

asked to write the number in the blank that corresponded to how often a behavior was thought to occur. A score of 1 indicated that a behavior occurred none of the time while a score of 7 indicated that the behavior occurred all of the time. The behaviors were rated as follows: 1 = none of the time, 2 = very rarely, 3 = a little of the time, 4 = some of the time, 5 =a good part of the time, 6 = most of the time, 7 = all of the time, and X = does not apply to me. The possible range of scores for each subscale is 0-100, where a lower score indicates an absence of the problem and higher scores indicate the presence of a more severe problem (Nugent, Sieppert & Hudson, 2001). Although all subscales do not contain the same number of questions, a formula, developed by Hudson, was used to make all subscale scores equal to 100% (D*100/(B*6), after appropriate items were reverse-scored (Nugent, Sieppert & Hudson, 2001).

The guideline for the principle clinical cut score for each subscale is 30, except for the suicide, alcohol use, and drug abuse subscales, which have a cutscore of 15. The secondary clinical cutscore, which suggests guidelines for inferring a serious problem, is 70, except for suicide, guilt, alcohol use and drug abuse (Nugent, Sieppert & Hudson, 2001). The depression, self-esteem, problems with mother, problems with father, stress, problems with friends, problems with school, aggression, and family subscales have a cut score of 30, which should be considered a preliminary indication of the problem, and a score above 70 indicates serious risk or presence of a serious problem (Nugent, Sieppert & Hudson, 2001). For suicide, any score above 15 should be considered representative of suicide risk (Nugent, Sieppert & Hudson, 2001). For feelings of guilt, any score above 30 may indicate significant problems with guilt (Nugent, Sieppert & Hudson, 2001). For confused thinking and disturbing thoughts, a score of 30 or more should indicate

preliminary evidence of a significant problem in these areas (Nugent, Sieppert & Hudson, 2001). For alcohol abuse and drug use a score above 15 indicates a significant problem in these areas (Nugent, Sieppert & Hudson, 2001).

Development of the Scale

The MAAS was designed to measure the degree of distinct and separate personal and social functioning problems in adolescent populations. Hudson has taken subscales from the MPSI that are relevant for use with adolescents and created an assessment scale for psychosocial problems in several domains (Nugent, Sieppert & Hudson, 2001). Hudson's scales have been established as appropriate for survey research with adolescent populations (Nugent Sieppert & Hudson, 2001). The MPSI produces information for use in clinical/therapeutic settings related to 27 areas of personal and social functioning. Scores produce a graph that could be used by a clinician to create a profile of the participant's problem status in many areas (Nugent Sieppert & Hudson, 2001). The MPSI was developed for use in social work practice and research settings (Nugent, Sieppert & Hudson, 2001).

Reliability and Validity

All of Hudson's scales meet the following psychometric requirements: they are reliable, valid, short, easy to administer, easy to score, easy to understand and interpret, and do not suffer response decay when repeatedly administered (Nugent Sieppert & Hudson, 2001). All scores on the MPSI/MAAS have been shown to produce scores with reliabilities, as estimated by coefficient alpha, in excess of .70; the majority produce scales with reliability over .85 and many have produced scores with reliability estimates that exceed .90 (Nugent, Sieppert & Hudson, 2001). Although evidence related to the

validity of the MAAS is not complete there is evidence of content validity, factorial validity and divergent validity (Nugent, Sieppert & Hudson, 2001).

Population Information

Hudson's scales have been normed with populations over age 12 years who have primarily grown up in the Western culture (Nugent, Sieppert & Hudson, 2001).

Limitations of this Measure

Hudson's scales are not appropriate for use with persons under 12 years of age, as participants require certain literacy and abilities to complete the questions (Nugent, Sieppert & Hudson, 2001). Hudson scales should not be used with persons who have severe cognitive impairments (Nugent, Sieppert & Hudson, 2001). The MPSI/MAAS may not be appropriate for use with individuals from non-Western or certain cultural backgrounds (Nugent, Sieppert & Hudson, 2001). In situations where decisions to release a client from treatment or incarceration may be based on the results of the MAAS or MPSI, clients may inaccurately report behaviors to make themselves look more favorable (Nugent, Sieppert & Hudson, 2001).

Procedures

Data Collection

All clinic patients who met inclusion criteria during the duration of the study were approached to volunteer for this study. All never married females, ages 14-21 years, who were pregnancy termination patients, not a judicial bypass patient and not emotionally distraught (as determined by a professional counselor employed by the clinic) were asked if they would be interested in participating in this study.

The intake receptionist, who sees every patient's medical record, put a "post-it" note on the chart of any never married patient age 14-21 who came in for an appointment during the duration of the study. This reminded the counselor to check the picture identification for this patient (as required by the clinic) and also informed the designated consent counselor that this patient was within the age range to approach to volunteer for the study.

At the beginning of each medical shift, one specific social work counselor was designated to assess stability in all potential participants. The primary investigator never acted as the consent counselor. In accordance with the normal protocol at this clinic, patients were called back for their normal intake in the order that they arrived for their appointments. The consent counselor called the study eligible patients back for their intake appointments and assessed the patients' level of emotional distress.

The consent counselor explained the study in private to eligible patients and indicated that patients could participate in the study if they chose to, that they could also decline with no penalties, and that they could discontinue their participation at any time with no penalties. Consent counselors also asked parents/guardians in private for permission for their minor children to participate at this time. Minor patients who chose to participate in the study were not allowed to do so until/unless parental consent was obtained. All voluntary participants were given the study packet to complete in private while they waited for different stages of their appointment process.

Researchers recommend that this study packet would require approximately 30 minutes to complete (Nugent, Sieppert & Hudson, 2001; Wolfe, et. al., 2001). This was found to be accurate during the duration of the study. Most often there was ample time

for patients to complete the brief study packet before they exited the counseling wing to see the doctor. Patients who did not complete the measures in the study packet before going over to see the doctor were instructed to turn the packet in unfinished. Incomplete packets were not used in this study. Data was collected until a total of 120 completed packets were collected.

All women ages 14 through 21, who came into the clinic during the study duration, were offered dating violence and mental health referral information by their individual counselor. This was done to provide referrals for any women who were suffering from one or many of the problems being measured in this study. The women who met the inclusion criteria were also given extended counseling times and the opportunity to discuss any concerns they had related to dating violence and other problems. This protocol was in place for all women within the study age range regardless of participation status. Individual counselors did not know which patients participated in the study unless a patient chose to identify their participation during the individual clinic counseling session. Clinic counselors did not see the results of any individual's study packet.

This was considered a safe and confidential environment for filling out the questionnaires because family, friends or male partners were not allowed in the counseling area where participants completed the packets in private.

Training

Counselor training on how to conduct this research project was held during a mandatory staff meeting before the project began. All counselors were trained on how to

obtain voluntary consent, how to assess for emotional distress, how to administer the surveys, how to process any associated distress with each patient in individual counseling sessions, and how to assess each patient for the need for further community referrals or medical assistance. Counselors who did not want to participate in data collection were never required to be designated as the consent counselor.

The licensed clinical social worker (LCSW) clinic counseling director trained the counselors, via demonstration, about appropriate inclusion criteria; how to assess patients and obtain voluntary consent; how to collect sealed questionnaires; and how to make appropriate referrals, if necessary during the individual counseling session (in accordance with the NASW social work code of ethics). After the training, all clinic counselors who participated in this research project were asked to pledge that they would ensure the confidentiality of the project participants. Participating counselors signed forms stating that they would adhere to the principals of confidentiality related to this project (see Appendix). Confidentiality pledges are kept in a locked file in the clinic records room for a period of five years.

Storage of Information

Materials with responses related to the study are stored in a locked closet in 301 Henson Hall in the College of Social Work- Knoxville campus, for a period of three years. These materials are in the office of Catherine Dulmus, Ph.D., a dissertation committee member for this study. Dr. Dulmus is the only person besides the principal investigator who will have keyed access to this confidential information.

Statistical Analysis

The small sample size was selected to accommodate the difficulty of recruiting subjects for participation and to allow the clinic to resume normal activity as quickly as possible. All eligible participants that came into the clinic were approached to participate in the study until 120 completed packets had been obtained. Characteristics of the sample, bivariate statistics and multivariate statistics were analyzed.

To answer research question one, an analysis of linear regression models was conducted. This allowed the researcher to examine bivariate relationships between dating violence and the 16 independent variables. To answer research question two, discriminant analysis was used to examine whether or not lower or higher levels of dating violence could be predicted from the 16 psychosocial problem subscales.

CHAPTER IV- RESULTS

Characteristics of Sample

This study assessed 120 adolescent women between the ages of 14 and 21. Twenty-three percent of the participants were age 14-17 and 69 % were ages 18-21.

Religious affiliation was split evenly as 45.8 % of respondents reported a religious affiliation, and 45.8% of respondents had no religious preference.

Age began dating- 1.7 % of participants began dating at age 12, 10 % at age 13, 24.2 % at age 14, 23.3 % at age 15, 25 % at age 16, and 15.9 % at age 17 or later. The minimum reported age participants began dating was 12. The maximum age was age 19. The average age participants began dating was 15.19, or approximately fifteen years and two months. The standard deviation was 1.51.

First sexual partner- 30.8 % of participants reported that the co-conceiving partner was their first sexual partner and 69.2 % reported that this was not their first sexual partner. The standard deviation was .464.

Number of previous pregnancies- the average number of previous pregnancies was .60 or less than one previous pregnancy, and 24.2 % of participants had been pregnant once before, 9.2 % had been pregnant twice before, 3.3 % had been pregnant three times or more before, and 54.2 % of participants had no history of previous pregnancies.

Partner age- 1.7 % of participant partners were age 15, 2.5 % were age 16, 5.8 % were age 17, 8.3 % were age 18, 10.3 % were age 19, 18.3 % were age 20, 21, or 22, and

24% were age 23 and older. The average reported age of the co-conceiving partner was 21.45 or approximately 21 years and 5 months of age. The minimum reported age of the partner was 15 and the maximum reported age of the partner was 41. Table 1 represents the characteristics of the sample.

Dependent Variable

The average dating violence score was 115.28. This score indicates a mild average level of dating violence. The minimum dating violence score was 70 and the maximum dating violence score was 224. The standard deviation was 26.4. Table 2 provides the descriptive statistics for the dependent variable: dating violence.

Table 1:

CHARACTERISTICS OF SAMPLE					
	MEAN	STANDARD DEVIATION	% OF MISSING DATA	MIN	MAX
Age	18.72	1.94	6.7	14	21
Religion (religious or not religious)	2.09	1.95	8.3	n/a	n/a
Age began dating	15.19	1.51	0	12	19
First sexual partner? (yes or no)	.308	.463	0	n/a	n/a
Partner age	21.45	4.27	0	15	41
Number of previous pregnancies	.605	.923	9.2	0	5

Table 2:

Dating Violence Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DATEVIOL	120	70.00	224.00	115.2750	26.40090
Valid N (listwise)	120				

Independent Variables

The characteristics of the independent variables are represented in Table 3. Fifty nine percent of respondents reported a depression score at 29 or below, indicating that they were not at risk of having a clinical problem with depression. Thirty-eight percent of respondents reported depression scores at 30 to 69, indicating potential clinical problems with depression. Two percent of respondents scored 70 or above, indicating serious clinical problems with depression.

For the self-esteem subscale, 68% of respondents scored a 29 or below, indicating no serious problems with self-esteem. Thirty-one percent of respondents scored at 30 or above, indicating the potential for problems with self-esteem. None of the respondents reported a score of 70 or higher on this subscale.

For problems with mother, 83% of respondents scored at 29 or below, indicating few reported problems with mother. Sixteen percent of respondents reported scores above 30, indicating the potential for problems with mother. One respondent (.08%) reported a score above 70, indicating serious problems with mother.

Table 3:

Descriptive Statistics of Independent Variables						
Psychosocial problem	**Mean**	**Standard Deviation**	**Min score**	**Max score**	**% of missing responses**	**Cutscore for problem indication**
Depression	28.63	17.78	0	100	1.7	30
Self-esteem	24.21	11.63	0	58.33	.8	30
Problems with Mom	17.04	15.85	0	83.33	5	30
Problems with Dad	23.54	21.35	0	100	15	30
Stress	26.70	21.43	0	91.66	7.5	30
Problems with Friends	12.67	12.01	0	67.95	5.8	30
Problems with School	31.05	16.14	0	66.67	20.8	30
Aggression	18.31	15.12	0	65	16.7	30
Family	22.46	18.00	0	73.08	20	30
Suicide	2.48	6.92	0	51.66	20	15
Guilt	21.12	21.12	0	100	12.5	30
Confused Thinking	21.36	21.88	0	90.48	10	30
Disturbing Thoughts	10.64	16.57	0	75.92	15.8	30
Memory Loss	17.10	17.87	0	95.83	16.7	30
Alcohol	9.53	9.25	0	42.22	32.5	15
Drug use	6.19	12.70	0	53.33	44.2	15

Sixty-nine percent of respondents scored at 29 or below on the problems with father subscale. Twenty-five percent of respondents scored between 30-69, indicating the potential for problems with father and 5% of respondents scored above a 70 indicating serious problems with father.

Fifty-five percent of respondents scored at a 29 or below on the personal stress subscale. Thirty-two percent of respondents scored between a 30-69 indicating the potential for concerning personal stress levels and 5% reported a score of 70 or above indicating serious problems with stress in those respondents.

Ninety-one percent of respondents reported a score of 29 or lower on the problems with friends subscale. Nine percent of respondents reported a score of 30 or higher, indicating potential problems with friendships in this sample. None of the respondents reported scores of 70 or higher on this subscale.

Forty-nine percent of respondents reported a score of 29 or lower on the problems with school subscale. Fifty one percent reported a score of 30 or higher, indicating the potential for significant problems in school. None of the respondents reported a score of 70 or higher on this subscale.

For the aggression subscale, 79% of respondents reported scores of 29 or lower. Twenty-one percent reported scores of 30 or higher on this subscale, indicating problematic levels of aggression. None of these respondents reported scores of 70 or higher on this subscale.

Sixty-eight percent of respondents had scores of 29 or lower on the problems with family subscale. Thirty-two percent of respondents had a score of 30 or higher on this subscale, indicating the potential for problems with the family. One respondent (.08%)

reported a score higher than 70 on this subscale, indicating that this respondent had serious problems with her family.

For suicide, 93.8% of respondents reported scores of 14 or lower. Fifteen is the established cutscore for problem indication for suicide, guilt, alcohol use and drug abuse only (Nugent, Sieppert & Hudson, 2001). Six percent reported a score of 15 or higher, indicating that these individuals had a high risk of suicide.

On the guilt subscale, 76% of respondents scored at 29 or below. Eighteen percent of respondents scored between 30 and 69 indicating potential for a problem, and 6% of respondents scored above 70, indicating serious levels of guilt in those respondents.

On the confused thinking subscale, 69% of respondents scored below 29. Twenty-six percent of respondents scored between 30 and 69, indicating the serious potential for problems with confused thinking. Five percent reported scores of 70 or above, which indicates serious clinical problems in this area for those respondents.

For disturbed thoughts, 89% of respondents reported scores of 29 or lower. Ten percent of respondents scored between 30 and 69, indicating the potential for problems in this area. One respondent (.01%) reported a score over 70, indicating a serious problem with disturbing thoughts.

For memory loss, 84% of respondents scored at 29 or below. Fourteen percent of respondents scored between 30 and 69 indicating the serious potential for problems in this area and one percent of respondents reported scores above 70.

Seventy-nine percent of respondents reported scoring 14 or lower on the alcohol use subscale. Fifteen is the cutscore for this subscale. Twenty-one percent of respondents

scored at 15 or above indicating the potential for alcohol abuse in those respondents. None of the respondents scored 70 or higher on this subscale.

Eighty-eight percent of respondents scored at 14 or lower on the drug abuse subscale. Twelve percent of respondents scored 15 or above, indicating the potential for a serious drug abuse problem. The graph of group means (Figure 1) provides a visual illustration of the overall group means.

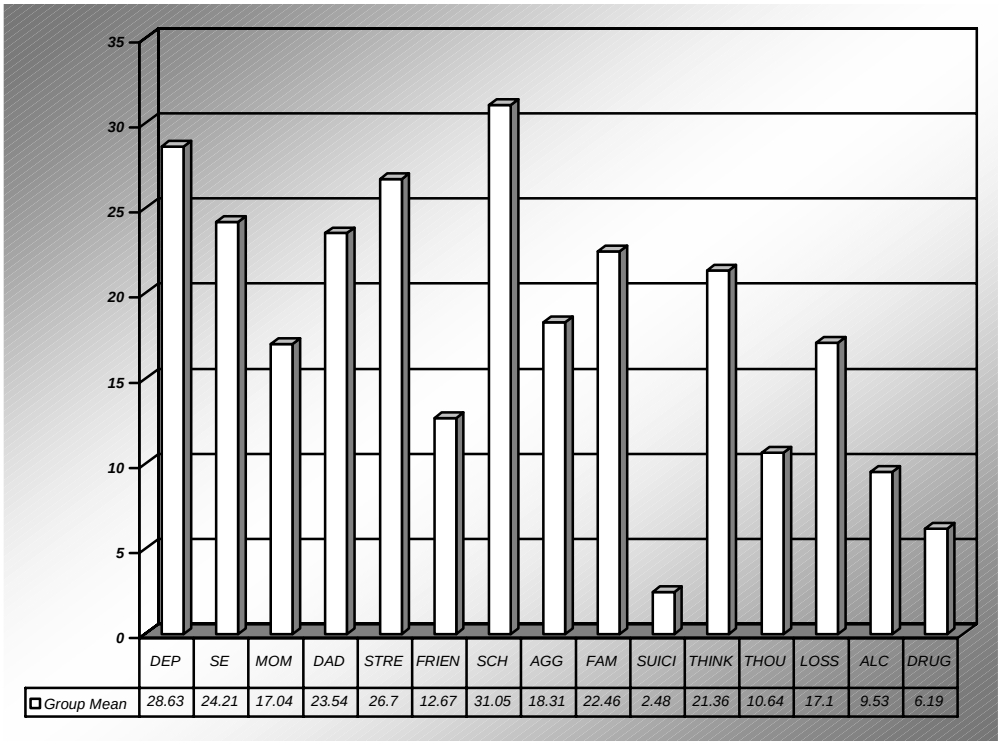


Figure 1- Graph of IV Group Means

Note: The cutscore for problem indication is 30 except for suicide, alcohol and drug, which have a cutscore of 15.

Bivariate Statistics

Missing Values

Missing values were handled using two techniques. When less than 10% of responses for a question or subscale were missing, the mean was used to estimate missing data. In mean substitution, all missing responses are replaced with the mean value of the reported responses. Mean substitution is the best estimate of a missing score on a normally distributed variable when there is no other knowledge about a person available (Acock, 1997).

When a question or subscale was missing more than 10% of responses, a technique known as the Estimization Maximization Algorithm (EM) was used to estimate missing data as recommended by Acock (1997). In comparisons using data from the National Survey of Families and Households (NSFH) the EM approach is shown to be extremely powerful and effective for estimating missing data, even when the missing responses are substantial and systematic (Acock, 1997). When compared to other missing value techniques such as listwise deletion, pairwise deletion, group mean substitution, imputation by regression, and the structural equation modeling approach, the EM approach is recommended as the best general solution for missing data problems (Acock, 1997).

Linear Regression Equations

A linear regression equation for each of the 16 psychosocial problem subscales was calculated using the overall dating violence scores as the dependent variable. The results of each of those regression equations are presented in this section. Linear regression equations were calculated in two different ways. First, the linear regression

equation was calculated using listwise deletion to eliminate cases where data was missing. Second, the regression equation was calculated using the techniques described above to estimate the missing data. All equations that were significant using listwise deletion were also significant when estimating missing values. Table 4 represents the regression equations.

A simple linear regression was calculated predicting participants' dating violence scores based on depression scores (n = 118). A significant regression equation was found ($F(1,116) = 5.285$, $p < .05$), with an R^2 of .044. Participants' predicted involvement in dating violence is equal to 106.524 + .312(DEP) points. Participants' average involvement in dating violence increased .312 points for each one-point increase in depression. Using the mean to estimate missing data, an additional linear regression equation was calculated predicting participants' dating violence scores based on depression scores. A significant regression equation was found ($F(1,118) = 5.353$, $p < .05$), with an R^2 of .043. Participants' predicted involvement in dating violence is equal to106.342 + .312(SMEANDEP). Participants' average involvement in dating violence increased .312 points for each one-point increase in depression.

A simple linear regression was calculated predicting participants' dating violence scores based on self-esteem scores (n = 119). A significant regression equation was found ($F(1,117) = 6.275$, $p < .05$), with an R^2 of .051. Participants' predicted involvement in dating violence is equal to 102.987 + .513(SE) points. Participants' average involvement in dating violence increased .513 points for each one-point increase in self-esteem problems.

Table 4:

Regression Equations Predicting Dating Violence				
Independent Variable	n	F	R^2	p
Depression	118	5.285	.044	.023*
	** 120	5.35	.043	.022*
Self-Esteem	118	6.275	.051	.014*
	** 120	6.305	.051	.013*
Problems with Mom	113	2.430	.020	.122
	** 120	2.391	.021	.125
Problems with Dad	101	1.271	.013	.262
	** 120	1.201	.010	.275
Stress	110	15.868	.127	.000*
	** 120	16.261	.121	.000*
Problems with Friends	112	1.477	.013	.227
	** 120	1.51	.013	.220
Problems with School	94	1.150	.012	.286
	** 120	.637	.005	.427
Aggression	99	.960	.010	.330
	** 120	2.066	.017	.153
Problems with Family	115	1.435	.012	.233
	** 120	1.193	.010	.277

Table 4 Continued				
	n	F	R^2	p
Suicide Risk	95	8.217	.080	.005*
	** 120	11.13	.086	.001*
Guilt	104	13.967	.119	.000*
	** 120	14.75	.111	.000*
Confused Thinking	107	5.245	.047	.024*
	**120	5.493	.044	.021*
Disturbing Thoughts	100	4.581	.044	.035*
	** 120	4.983	.041	.027*
Memory Loss	99	.872	.009	.353
	**120	.744	.006	.390
Alcohol Use	80	.007	.000	.935
	**120	.240	.002	.625
Drug Abuse	66	.056	.001	.813
	** 120	.190	.002	.664

* significant at .05
** indicates missing data was estimated using identified methods

A simple linear regression was calculated for predicting participants' dating violence involvement based on problems with mother scores (n = 114). The regression equation was not significant ($F(1,112) = 2.391$, $p > .05$), with an R^2 of .021. Using the EM algorithm (EM) to estimate missing data, another simple linear regression equation was calculated for predicting participants' dating violence involvement based on problems with mother. The second regression equation was not significant ($F(1, 118) = 1.201$, $p > .05$), with an R^2 of .01. Problems with mother could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated for predicting participants' involvement in dating violence based on problems with father scores (n = 102). The regression equation was not significant ($F(1,100) = 1.271$, $p > .05$), with an R^2 of .013. Using EM to estimate missing data, another simple linear regression equation was calculated for predicting participants' dating violence involvement based on problems with father scores. The second regression equation was not significant ($F(1, 118) = 1.201$, $p > .05$), with an R^2 of .01. Problems with father could not be used to predict involvement in dating violence.

A simple linear regression was calculated predicting participants' dating violence involvement based on stress scores (n = 111). A significant regression equation was found ($F(1,109) = 15.868$, $p < .05$), with an R^2 of .127. Participants' predicted involvement in dating violence is equal to 103.538 + .446(STRESS) points. Participants' average involvement in dating violence increased .446 points for each one-point increase in personal stress. Using the mean to estimate missing values, another simple linear regression equation was calculated predicting participants' involvement in dating

violence based on stress scores. A second significant regression equation was found ($F(1, 118) = 16.261$, $p < .05$), with an R^2 of .121. Thus, participants' predicted involvement in dating violence is equal to 103.353 + .446 (MEANSTRESS), indicating an average .446 point increase in dating violence for every point increase in stress.

A simple linear regression was calculated for predicting participants' dating violence involvement based on problems with friends scores (n = 112). The regression equation was not significant ($F(1,111) = 1.477$, $p > .05$), with an R^2 of .013. Using the mean to estimate missing self-esteem scores, another simple linear regression was calculated for predicting participants' dating violence involvement based on problems with friends. The second regression equation was not significant ($F(1, 118) = 1.518$, $p > .05$), with an R^2 of .013. Problems with friends could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated for predicting participants' dating violence scores based on problems with school scores (n = 94). The regression equation was not significant ($F(1,93) = 1.150$, $p > .05$), with an R^2 of .012. Using EM to estimate missing scores on problems with school, a second simple linear regression equation was calculated for predicting participants' dating violence scores based on problems with school scores. This second equation was not significant ($F(1, 118) = .637$, $p > .05$), with an R^2 of .005. Problems with school could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated for predicting participants' dating violence involvement based on problems with aggression scores (n = 99). The regression equation was not significant ($F(1,98) = .960$, $p > .05$), with an R^2 of .01. Using

EM to estimate missing aggression scores, another simple linear regression equation was calculated for predicting participants' dating violence involvement based on problems with aggression. This second equation was not significant ($F(1, 118) = 2.066$, $p > .05$), with an R^2 of .017. Problems with aggression could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated for predicting participants' dating violence scores based on problems with family scores ($n = 115$). The regression equation was not significant ($F(1,114) = 1.435$, $p > .05$), with an R^2 of .012. Using EM to estimate missing scores on problems with family, another simple linear regression equation was calculated for predicting participants' dating violence involvement based on problems with family. The second equation was not significant ($F(1,118) = 1.193$, $p > .05$), with an R^2 of .01. Problems with family could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated predicting participants' dating violence scores based on guilt scores ($n = 104$). A significant regression equation was found ($F(1,103) = 13.967$, $p < .05$), with an R^2 of .119. Participants' predicted involvement in dating violence is equal to 106.977 + .446(GUILT) points. Participants' average involvement in dating violence increased .446 points for each one-point increase in guilt. Using EM to estimate missing data, a second simple linear regression equation was calculated and another significant regression equation was found ($F(1,118) = 14.759$, $p < .05$), with an R^2 of .111. Participants' predicted involvement in dating violence is equal to 106.124 + .438(GUILT2) points. Participants' average involvement in dating violence increased .438 points for every point increase in guilt.

A simple linear regression equation was calculated predicting participants' dating violence scores based on risk of suicide scores (n = 95). A significant regression equation was found ($F(1,94) = 8.217$, $p < .05$), with an R^2 of .08. Participants' predicted involvement in dating violence is equal to 113.215 + 1.089(SUICIDE) points. Participants' average involvement in dating violence increased 1.089 points for each one-point increase in suicide risk. Using EM to estimate missing suicide scores, another regression equation was calculated and found significant ($F(1,118) = 11.138$, $p < .05$), with an R^2 of .086. Participants' average involvement in dating violence is equal to 112.288 + 1.213(SUICIDE2), indicating a 1.213 point increase in dating violence for every point increase in suicide risk.

A simple linear regression equation was calculated for predicting participants' dating violence scores based on confused thinking scores (n = 107). The regression equation was significant ($F(1,106) = 5.246$, $p < .05$), with an R^2 of .047. Participants' average involvement in dating violence is equal to 109.554 + .271(THINK). Participants' average involvement in dating violence increased .271 points for each one-point increase in confused thinking. Using EM to estimate missing values another linear regression equation was calculated and found to be significant ($F(1,118) = 5.493$, $p <.05$), with an R^2 of .044. In the second equation, participants' average involvement in dating violence is equal to 109.636 + .265(THINK2). Participants' average involvement in dating violence increased .265 points for each one-point increase in confused thinking.

A simple linear regression equation was calculated for predicting participants' dating violence involvement based on disturbing thoughts scores (n = 100). The regression equation was significant ($F(1,99) = 4.581$, $p > .05$), with an R^2 of .044.

Participants' average involvement in dating violence is equal to 111.664 + .351(THOUGHTS). Participants' average involvement in dating violence increased .351 points for each one-point increase in disturbing thoughts. Using EM to estimate missing data, another simple regression equation was calculated and found to be significant ($F(1,118) = 4.983$, $p < .05$), with an R^2 of .041. In the second equation, participants' average involvement in dating violence is equal to 111.623 + .344(THOUGHTS2). Participants' average involvement in dating violence increased .344 points for each one-point increase in disturbing thoughts.

A simple linear regression equation was calculated for predicting participants' dating violence scores based on memory loss (n = 99). The regression equation was not significant ($F(1,98) = .872$, $p > .05$), with an R^2 of .009. Using EM to estimate missing data, another simple linear regression was calculated and was found not to be significant ($F(1,118) = .744$, $p > .05$), with an R^2 of .006. Memory loss could not be used to predict involvement in dating violence.

A simple linear regression was calculated for predicting participants' dating violence involvement based on alcohol use scores. The regression equation was not significant ($F(1,79) = .007$, $p > .05$), with an R^2 of .000. Using EM to estimate missing data, another simple linear regression equation was calculated and found to not be significant ($F(1,118) = .24$, $p > .05$), with an R^2 of .002. Alcohol use could not be used to predict involvement in dating violence.

A simple linear regression equation was calculated for predicting participants' dating violence involvement based on drug abuse. The regression equation was not significant ($F(1,65) = .056$, $p > .05$), with an R^2 of .001. Using an EM algorithm to

estimate missing data, another simple linear regression equation was calculated and was found not to be significant ($F(1, 118) = .190$, $p > .05$), with an R^2 of .002. Drug use could not be used to predict involvement in dating violence.

Seven psychosocial problems emerged as being significantly associated with dating violence in this sample of adolescent pregnancy termination patients: depression, self-esteem, personal stress, guilt, suicide risk, confused thinking and disturbed thoughts. These significant results indicate that the answer to research question one is yes, there are seven significant psychosocial problems measured by the MAAS that are associated with dating violence in this sample.

Multivariate Analysis

Discriminant Function Analysis

Discriminant analysis (DA) is a statistical technique that allows a researcher to study differences between two or more groups with respect to several variables simultaneously (Klecka, 1980; Wodarski, 1997). The major function of discriminant analysis (DA) is to predict group membership from a set of predictors (Tabachnick & Fidell, 1989; Wodarski, 1997). The major prerequisites for discriminant analysis are that two or more groups exist that are presumed to differ on several variables (Klecka, 1980). Discriminant analysis maximizes the between groups differences on discriminant scores and minimizes the within-groups differences (Bogler, 2002, Wodarski, 1997).

Bogler (2002) used discriminant analysis to construct similar profiles of two types of school teachers: those with reported low levels of job satisfaction and those with high levels of job satisfaction. In the Bogler (2002) study, job satisfaction scores were broken

up into low and high groups and discriminant analysis was conducted to predict group membership from a set of job satisfaction predictors. In the Bogler (2002) study the eigenvalue was very high (2.256) which implied that the between-groups differences were much greater than the within groups differences. Thus, job satisfaction could be predicted from the set of satisfaction predictors in this study. In another recent study, participants' Gang Membership Inventory (GMI) scores were broken into three groups (low, medium and high) and discriminant analysis was used to investigate the extent to which self-concept would predict involvement in gang activity (Herrmann, Jeffries, McWhirter & Sipsas-Herrmann, 1997). Their results indicate that self-concept could be used to predict involvement in gang activity.

Discriminant analysis is used to determine whether or not group membership can be predicted reliably from a set of predictors (Tabachnick & Fidell, 1989; Wodarski, 1997). In the present study the goal was to determine if discriminant analysis could predict better than chance whether these adolescent women would be involved in higher or lower levels of dating violence based on their scores on the 16 MAAS subscales. This is the major research question that discriminant analysis was used to answer. Using discriminant analysis, the researcher attempted to construct profiles predicting involvement in two levels of dating violence: lower reported levels of dating violence and higher reported levels of dating violence. Involvement in 16 psychosocial problems was examined as predictors that discriminate between patients with reported low versus high levels of dating violence.

In the current study, overall levels of dating violence scores ranged from 70-224. To create two groups, dating violence scores were broken at the median into low and high

groups. Patient scores in the low group ranged from 70-113.5 and patient scores in the high group ranged from 113.6 to 224. Missing values were estimated with either the mean (when less than 10% of scores were missing) or an EM algorithm (when 10% or more of scores were missing). The discriminant function analysis was not conducted with the data using listwise deletion because the sample would have been reduced to such a small size it would not have been as meaningful (Klecka, 1980). Table 5 indicates the results of the discriminant analysis for the two dating violence groups.

The results of the discriminant function analysis indicate that the subscale scores from the MAAS could not be used to predict higher or lower levels of involvement in dating violence in this population of adolescent pregnancy termination patients. The utility of the discriminant function as a predictor model can be determined by the eigenvalue interpretation, the canonical correlation, and the lambda analysis (Klecka, 1980; Tabachnick & Fidell, 1989). Results indicate the discriminant function has a low eigenvalue at .146. The eigenvalues associated with discriminant functions indicate the relative proportion of between group variability accounted for by each function (Tabachnick & Fidell, 1989). Eigenvalues represent the ratio of between-groups to within-groups sum of squares (Klecka, 1980). The low eigenvalue indicates that the function may not be a good function, as between group differences cannot be

Table 5:

Summary of Canonical Discriminant Function for Dating Violence Groups						
Function	Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-Square	df	p
1	.146	.356	.873	14.944	16	.529

distinguished from within group differences (Klecka, 1980). The discriminant function canonical correlation indicates a low association between the discriminant scores and the groups, (r = .356). Wilks' lambda (λ) represents the proportion of the total variance not explained by the discriminant model, so small values indicate a better model (Klecka, 1980). For the current model the large proportion of total variance not explained by the discriminant function was λ = .87, and was transformed into χ^2 values that were not statistically significant.

Like regression equations, discriminant functions are predicted from the sum of the series of predictors, each weighted by a coefficient (Tabachnick & Fidell, 1989). There is one set of discriminant function coefficients for the discriminant function, which results from having two groups. Were there to be three groups, there would be two discriminant functions and two sets of discriminant function coefficients, and so forth (Tabachnick & Fidell, 1989). Subjects get separate discriminant function scores for each discriminant function when their own scores on predictors are inserted into the equations (Tabachnick & Fidell, 1989). A canonical correlation is found for each discriminant function and successive discriminant functions are evaluated for significance (Tabachnick & Fidell, 1989).

Table 6 indicates the standardized coefficients for the discriminant function. The process of labeling the discriminant function involves identifying the most heavily weighted coefficient for distinguishing among groups (Klecka, 1980; Tabachnick & Fidell, 1989). Labeling is performed by calculating the commonalities among the variables with the highest absolute standard coefficients (Tabachnick & Fidell, 1989). If

Table 6:

Standardized Canonical Discriminant Function Coefficients	
Variable	Discriminant Function Coefficient
Problems with Friends	.202
Stress	.286
Problems with Mom	-.270
Self-Esteem	.294
Depression	-.262
Problems with Dad	-.049
Problems with School	.120
Aggression	-.016
Problems with Family	-.478
Suicide Risk	.279
Guilt	.955
Confused Thinking	-.034
Disturbed Thoughts	-.295
Memory Loss	-.370
Alcohol Use	.397
Drug Abuse	-.545

this discriminant function had been found significant, it would be labeled guilt, since guilt was the highest coefficient of the discriminant function at .955. However, it is not recommended that non-significant functions be labeled or interpreted (Klecka, 1980). This analysis indicated that this was a weak predictor model and could not be used to predict levels of dating violence in this sample.

An additional purpose of discriminant analysis is to classify groups based on predictor variables (Tabachnick & Fidell, 1989; Wodarski, 1997). The results of this classification are shown in table 7.

Only 60.8% of the original grouped cases were correctly classified. Because the discriminant function was not significant, the subscale scores on the MAAS could not be used to predict whether or not individuals in this sample would be more likely to be involved in lower or higher levels of dating violence.

Table 7:

Dating Violence Group Classification Results[a]

			Predicted Group Membership		
		DVNEW	0 (low)	1(high)	Total
Original	Count	0 (low)	41	19	60
		1(high)	28	32	60
	%	0 (low)	68.3	31.7	100.0
		1(high)	46.7	53.3	100.0

a. 60.8% of original grouped cases correctly classified.

The results of this discriminant analysis could not accurately predict group membership in lower or higher levels of dating violence. Predicting group membership using the discriminant function was barely better than predicting group membership based on probability. The percent of cases correctly classified using discriminant function analysis is graphed (figure 2).

Comparison of Group Means

Although it is recommended that non-significant discriminant function results should not be interpreted (Klecka, 1980), the means for each of the predictors do provide some important exploratory information about the groups. Thus, the distribution of means for each of the predictors was examined (table 8). Those respondents in the group with

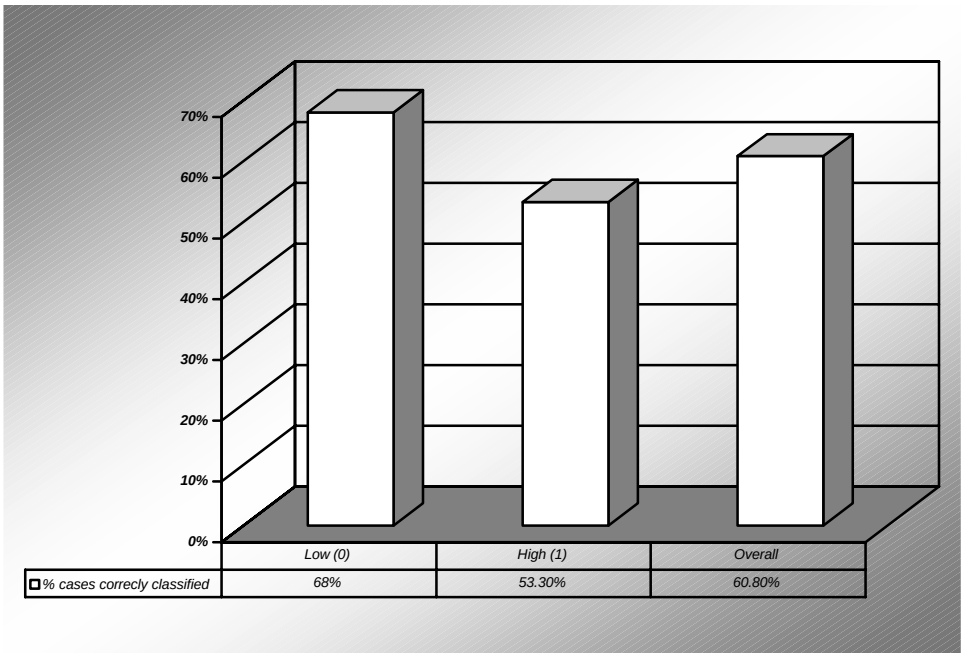


Figure 2: Percent of Cases Correctly Classified using DA

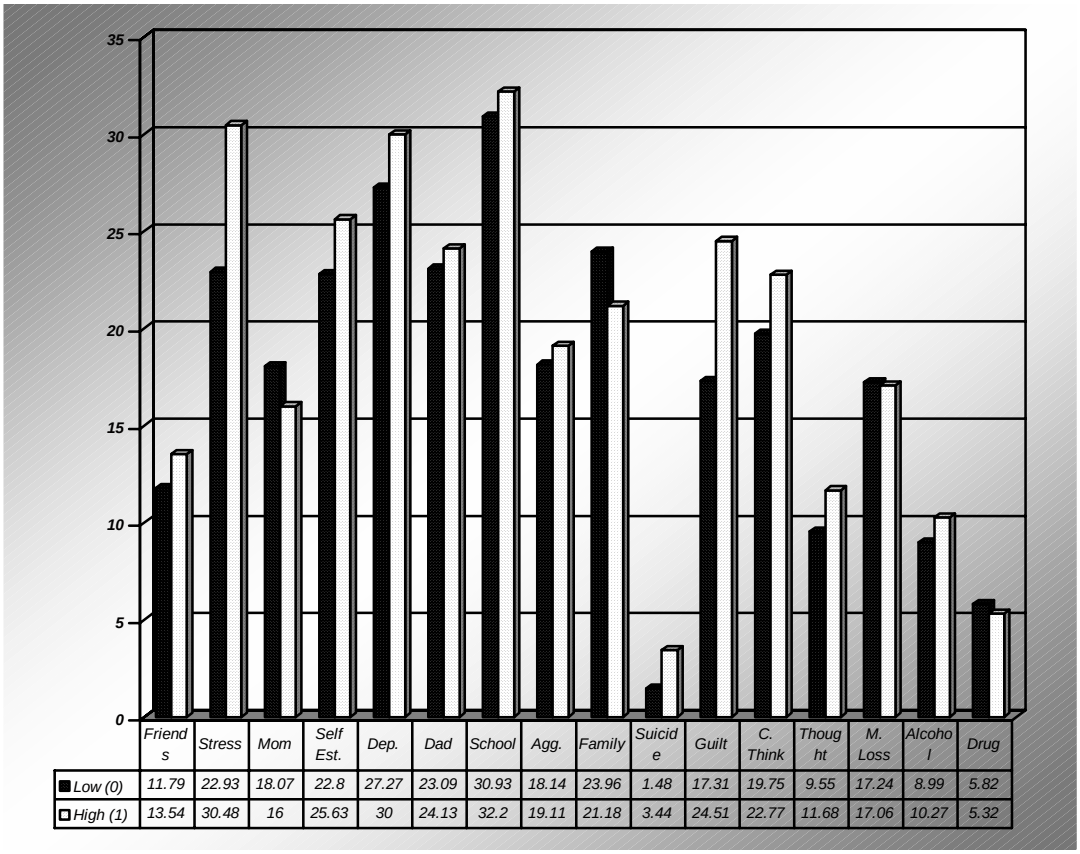
Table 8:

Levels of Dating Violence Mean Distributions with Standard Deviations		
Predictor	Low Dating Violence (0) Mean (SD)	High Dating Violence (1) Mean (SD)
Problems with Friends	11.79 (12.75)	13.54 (10.48)
Stress	22.93 (18.40)	30.48 (22.06)
Problems with Mom	18.07 (17.82)	16.00 (12.71)
Self-Esteem	22.80 (17.69)	25.63 (12.33)
Depression	27.27 (17.69	30.00 (17.60)
Problems with Dad	23.09 (21.37)	24.13 (19.82)
Problems with School	30.93 (15.25)	32.20 (15.08)
Aggression	18.14 (11.69)	19.11 (16.53)
Problems with Family	23.69 (17.85)	21.18 (17.82)
Suicide Risk	1.48 (3.86)	3.44 (8.10)
Guilt	17.31 (19.24)	24.51 (20.48)
Confused Thinking	19.75 (18.74)	22.77 (23.09)
Disturbing Thoughts	9.55 (14.29)	11.68 (16.57)
Memory Loss	17.24 (17.64)	17.06 (15.36)
Alcohol Use	8.99 (7.50)	10.27 (9.06)
Drug Abuse	5.82 (11.68)	5.32 (9.33)

Note: Lower scores indicate less of a risk for a clinical problem

higher levels of dating violence expressed significantly higher scores on stress and guilt when compared to the group with lower levels of dating violence. In terms of these mean scores, they suggest that there is a reason for future researchers to further examine the relationship between guilt, stress and dating violence. The comparison of dating violence group means is graphed (figure 3).

The analyses provided non-significant results with regards to support of the research question whether or not lower or higher dating violence group membership could be predicted from subscale scores on the MAAS. The eigenvalue was low. The correct classification rate was not high. The discriminant function was not statistically significant. In this study, higher or lower dating violence group involvement could not be predicted from the psychosocial problems measured on the MAAS.



	Friends	Stress	Mom	Self Est.	Dep.	Dad	School	Agg.	Family	Suicide	Guilt	C. Think	Thought	M. Loss	Alcohol	Drug
Low (0)	11.79	22.93	18.07	22.8	27.27	23.09	30.93	18.14	23.96	1.48	17.31	19.75	9.55	17.24	8.99	5.82
High (1)	13.54	30.48	16	25.63	30	24.13	32.2	19.11	21.18	3.44	24.51	22.77	11.68	17.06	10.27	5.32

Figure 3: Comparison of Discriminant Function Dating Violence Group Means

CHAPTER V- DISCUSSION

Chapter V includes a discussion of the findings from the study. First, the findings with respect to which of the 16 psychosocial factors measured by the MAAS were significantly associated with dating violence. Next, the findings with regards to whether or not group membership in either higher or lower levels of dating violence could be predicted using DA. This chapter also contains the limitations of the study, and implications for social work practice, policy and research.

The purpose of this study was to examine which factors would be significantly associated with dating violence and whether or not dating violence group membership could be predicted from the scores on the MAAS. This study answered the following research questions: 1) Which, if any, of the 16 psychosocial problems measured by the MAAS are significantly associated with dating violence, and 2) Could dating violence group membership be predicted using the scores from the 16 subscales on the MAAS?

Bivariate Findings

The findings of this exploratory study indicate that the answer to research question one is: yes, there are some psychosocial problems that are measured by the MAAS that are significantly associated with dating violence in this sample of adolescent pregnancy termination patients. Depression, suicide risk, confused thinking and disturbed thoughts are indicators of serious mental health problems, while stress, guilt and problems with self-esteem may tend to indicate problems with socialization. It is notable that all of the seven significant factors can also be symptoms of depression.

Significant Bivariate Findings

Depression

Depression is a mood disorder that can manifest itself in many ways (Andreasen & Black, 1995). Symptoms of depression vary and include feelings of worthlessness, thoughts of suicide, guilt, confused thinking and disturbing thoughts (Andreasen & Black, 1995). There is not significant support in the dating violence literature for an association between dating violence and depression. This is likely because this relationship has not been explored at length in dating violence studies. This sentiment is echoed by researchers who report that the relationship between mental illness and dating violence needs to be explored in greater detail (Williams and Martinez 1999). However, it has been found that boys with a history of childhood maltreatment were more likely than boys without a maltreatment history to report clinical levels of depression, and these boys also had a greater risk of using threatening behaviors with dating partners (Wolfe, Scott, Wekerle & Pittman, 2001). Others report that females involved in violent dating relationships report more internalizing symptoms including depression when compared to females not involved in violent relationships (Chase, Treboux & O'Leary, 2002). There is also some support for the relationship between depression and violence in the general youth violence literature. In a study of 57 children reporting experiences with family or community violence, the presence of depression at levels of serious concern was found more often when compared to children not reporting experiences with violence (Freeman, Mokros & Pozanski, 1993). In a more recent study, adverse childhood experiences such as family violence and sexual abuse were significantly associated with depressed affect in

a retrospective study of 17,337 adults (Dube, et. al., 2001). In another study comparing two groups of physically abused adolescents (those living with violence in their home and those with no violence in their home), adolescents with violence in their homes were found to be at greater risk for symptoms of depression than those not living with violence (Pelcovitz, et. al., 2000). In a sample of 94 urban adolescents, severity of depression was not associated with exposure to violence but did mediate between dating violence and suicidal ideation and PTSD symptoms (Mazza & Reynolds, 1999). It is clear that depression and its relationship to all types of violence and especially to dating violence needs to be studied further to get a clearer understanding of the relationship between the two problems.

All of the significant psychosocial problems in this present study can be indicators of major depression (Andreason & Black, 1995). In addition, the scores from this sample on self-esteem, stress, guilt, confused thinking and disturbing thoughts are all correlated with depression at the .01 level (2 tailed) (see attached correlation matrix in Appendix). It may be that depressed adolescents become involved in dating violence. It is also possible that these adolescents were depressed due to their unwanted pregnancy and /or their decision to terminate. It is important for researchers to carefully examine depression and all the indicators in better detail to determine extent of this relationship.

Self-Esteem

It is not surprising that problems with self-esteem were found to be significantly associated with dating violence in this population as the results of many dating violence studies support this finding. The earliest dating violence studies report that dating violence results in low self-esteem (Burke, Stets & Pirog-Good, 1988; O'Keefe,

Brockopp & Chew, 1986; Stets & Pirog-Good, 1987). Self-esteem has been shown to be significantly associated with dating violence in groups of college age and high school age adolescents (Ackard & Neumark-Sztainer, 2002; O'Keefe, 1998; Sharpe & Taylor, 1999). One group of researchers reports that dating violence caused diminishment of self-esteem in their study (Kasian & Painter, 1992). The results of this current study add to the literature supporting that self-esteem and dating violence are related. However the direction of this relationship is still unclear. While some postulate that low self-esteem is caused by dating violence, it is also possible, based on the current study results, that low self-esteem may lead to involvement in dating violence. Much more research is needed to determine the direction and intensity of the relationship between dating violence and self-esteem.

Stress

Personal stress has not been previously associated with dating violence according to the dating violence literature. Personal stress has not been examined very often in the general youth violence literature, either. In one study of adolescents and their mothers, maltreated adolescents experienced higher levels of daily stress than their nonmaltreated counterparts (Williamson, Borduin & Howe, 1991). Researchers have reported that male adolescents who live in violent neighborhoods for five or more years report higher levels of stress and conflict than those not living in violent neighborhoods (Paschall & Hubbard, 1998). Yet, another recent study failed to find that stress was associated with psychopathology in a sample of children and adolescents (McMahon et. al., 2003).

The association between stress and dating violence in this study is a new contribution to the dating violence literature and needs to be studied in greater depth, to

determine the direction of this relationship and examine if this relationship would exist in other samples. Current subjects were pregnancy termination patients, and terminating a pregnancy, especially in our culture, is an unusually stressful event. Thus, it is possible that stress is emerging in this study because these women are unusually stressed pregnancy termination patients rather than because personal stress was really associated with dating violence in this sample.

Suicide Risk

The association between dating violence and suicide risk is supported in the adolescent violence literature. Suicide risk has been associated with dating violence previously in boys and girls (Krieter, et. al., 1999; Wolfe, Scott, Wekerle & Pittman, 2001). In one study, researchers report that suicide attempts were positively related to violence in adolescents age 15 or younger (Benda & Corwyn, 2002). In another study, results indicate that children who report exposure to violence more often report thoughts about death or injury (Freeman, Mokros & Pozanski, 1993). In another study of dangerously violent adolescents, the females in the sample had significantly higher levels of suicide potential than males (Flannery, Singer & Wester, 2001). Violence perpetration and suicide were found to be risk factors in a study using the sample from the National Longitudinal Study of Adolescent Health (Borowsky, Ireland & Resnick, 2001). In another study, results indicate a powerful graded relationship exists between adverse childhood experiences (including violence) and risk of attempted suicide throughout the lifespan (Dube, et. al., 2001). Others report non-significant relationships between violence exposure and suicidal ideation in adolescents (Mazza & Reynolds, 1999). The results of the current study contribute to the literature indicating an association between

dating violence and suicide. There is still much that is unknown about the relationship between dating violence and risk of suicide, thus more research is warranted in this area.

Guilt

There is little discussion of guilt found in the dating violence and youth violence literature. Findings from one study do indicate that girls did report that they used mild forms of violence on boys because they expected it would make the boys feel guilty for mistreating them (Follingstad, et. al., 1991). Such results suggest that girls do project guilt feelings onto boys who mistreat them. Perhaps this is because girls themselves feel guilty when they are involved in/use dating violence, or perhaps because they expect that boys should feel guilty for mistreating them.

It is not surprising that guilt emerged as a significant predictor of dating violence in a population of adolescents who may have felt very guilty about either being pregnant, choosing to terminate that pregnancy, or both. It is important to mention that guilt may not be associated as much with dating violence as it was with pregnancy termination. In accordance with feminist theory, the social construction of guilt in females plays a role in the way women interact in intimate relationships in our society (Andersen, 2000). This component of feminist theory may help to explain why guilt was associated with dating violence in this population. More research about the relationship between feelings of guilt and dating violence is needed to determine if guilt will continue to be associated with dating violence in other at-risk populations.

Confused Thinking and Disturbing Thoughts

Confused thinking and disturbing thoughts are not mentioned in the dating violence literature. In one study, intrusive thoughts were associated with exposure to

violence in a sample of 349 urban African American children and adolescents (Li, et. al., 1998). These thinking disorders are a part of dysfunctional thinking patterns that represent involvement in a number of psychosocial problems, so it is not surprising that these problems were significantly associated with dating violence. The results of this current study contribute to the literature by indicating that disordered thoughts are associated with dating violence in this sample. It is important for future researchers to examine the relationship between these two problems in greater detail to determine the extent and direction of the relationship.

Important Non Significant Bivariate Results

In some cases, problems that showed up as non-significant were surprising. Aggression, for one, has been found to be associated with dating violence in other adolescent samples (Bird, Stith & Schladale, 1991; Capaldi, et. al., 2001; Riggs & Caulfield, 1997; Ryan, 1995). The aggression in all of the mentioned studies was found in male samples. It may be that aggression was not significantly associated with dating violence in this population because this was an all-female sample. It is important for future researchers to focus on gaining knowledge of the extent of the relationship between general aggression and dating violence in at risk adolescents.

It is also interesting that problems with school were not significantly associated with dating violence in this sample, as the results of two other studies did indicate a significant association between the two problems (Bergman, 1992; Ruterman & Burcky, 1989). It may be that problems in school were not significant in this population because 69% of this sample was age 18-21, and therefore, they are old enough to be out of high school. It may be that if this study were to be conducted on a high school or college only

sample, then problems with school would turn out to be significantly associated with dating violence.

Multivariate Findings

The discriminant function analysis failed to provide support for predicting dating violence group membership from the scores on the psychosocial subscales. This may have occurred because the dating violence scores were broken arbitrarily at the median rather than at a point supported empirically by the literature. However, this was done because the CADRI is a new instrument, and this is one of the few times it has been administered. Thus, there is little empirical work to draw from when considering how to break up the CADRI scores for a discriminant analysis. This study is an important contribution to the literature because it provides exploratory information that can later be used to guide the creation of groups for future studies using multivariate analyses.

One other possible explanation for the non-significant discriminant function could be that the ratio variable of the dating violence score was collapsed into a categorical score (low or high) in order to conduct the discriminant analysis. Thus, the variance of the dating violence score was reduced and it may have made it more statistically difficult to find meaningful distinctions using this type of analysis. By reducing dating violence to a dichotomous variable, the range was restricted and this can make it more difficult to detect a statistical correlation.

Limitations

There are several limitations to this study that are worth identifying. This was an arbitrary, small convenience sample with no comparison group. This small, non-probability sample weakened the study. The use of such a unique, all female sample from only one location also limits the generalizability of this study. These limitations prevented the researcher from making any claims that these findings could be generalized to any other groups of adolescent populations.

The use of a non-experimental, or 'one-shot case study' design was a significant limitation of this study. This type of study design limits the ability of the researcher to make any claims that the outcomes of this study have internal validity.

Because this data was collected at only one point in time, it is possible that proximal issues such as mood or elevated emotional levels influenced the self-report process. The setting of this data collection makes this more probable. This demonstrates that measuring baseline mood in future studies with termination patients might change or influence research results. This approach has been suggested by other researchers (Wekerle, et. al., 2001).

There could have been problems with measurement interpretations as adolescents at age 14 may have different abilities for reading and interpreting the questions on both the MAAS and the CADRI than individuals at age 21. Older adolescents may have more dating experiences, which could also increase their understanding about how to interpret and answer questions related to dating violence.

Questionnaires for this study were carefully selected, keeping the limitations of previous study questionnaires in mind. Even so, making a decision to terminate a

pregnancy creates a unique state of emotional being that much of the population does not experience during adolescence. Such an emotional state may have had yet unidentified effects on the way participants interpreted and answered the questions in the measurement packet for this study. The measures in this study were not designed specifically for use with pregnancy termination patients, who may have unique measurement needs that have yet to be addressed. Thus, measurement issues related to adolescent pregnancy termination patients need to be the subject of future research.

The sole use of self-report measures as the means of collecting data in this study likely resulted in scores that over or under represented particular behaviors. Such a practice is especially common in adolescent study samples (Wolfe, et. al., 2001). Verification from a parent and/or accompanying support people would be especially valuable in future studies of this population. However, such studies would have challenges related to confidentiality.

Although participants were assured of confidentiality, the nature of the situation where the data was collected may have made some participants hesitant to report their experiences because of fear that an accompanying person could find out the answers. This may have resulted in under or over reporting of certain behaviors, especially dating violent behaviors. Qualitative interviews could have been used to reduce participant anxiety and to supplement the self-report measures. Future research efforts with pregnancy termination patients should include qualitative interviews.

Due to these limitations this should be considered an exploratory study. The main value of this study is to flesh out possible predictors of dating violence in this at-risk group based on involvement in other psychosocial problems in a variety of domains. The

descriptive predictors that were found to be significant in this study need to be examined in more depth through more empirically rigorous research designs.

Implications

Practice

Dating violence prevention programs must focus on high-risk adolescent populations (Pacifici, Stoolmiller & Nelson, 2001). It is also important that treatment options for adolescent women be made accessible for all age groups. Practitioners must assess teens that are being treated for mental health problems for dating violence, even if such assessments are not mandated by their agencies.

When teaching practitioners, social work faculty must cover domestic and dating abuse and the effects of such abuse in practice courses. Promising interventions for domestic violence must also be covered in practice courses at the BSW and MSW levels. Field instructors must also work with student interns to help them learn to probe for domestic abuse and teach them ways to offer interventions when such abuse is discovered.

Multi-component interventions focused on reducing risks in several domains (including family, school, and peer environments) need to be developed. Prevention interventions could then be targeted towards at risk adolescents or universally implemented in school or community settings. Young students need to be taught the dynamics of how to have healthy relationships starting in kindergarten. Children need to learn how to conceptualize the reality of relationships before they enter into them. This

type of preparation would make older students more accepting of dating violence interventions once they reach higher grade levels.

Policy

States need to adopt policies that require all state agencies working with adolescents who have mental health problems to be assessed for dating violence, as well. Funding needs to be allocated when these policies are enacted. All state employees who work with adolescents who have mental health problems must be trained to administer rapid assessment instruments to assess for dating violence.

Considering that dating violence is associated with mental health problem indicators, schools need to adopt policies that require dating violence education starting in elementary school. Such education needs to focus specifically on the needs of each gender related to dating violence. Efforts are essential to help prevent violence in the future.

In addition, federal policies need to be adopted that place a social worker in every school, so that there is a place to refer students when it is found that they have a problem with involvement in dating violence. Social workers could also be used as a resource for assessing for depression and other psychosocial problems that may be associated with involvement in dating violence. If schools had a policy of referring troubled students to social workers for interventions, then perhaps students could be helped before involvement in dating violence led to other problems, such as the possibility of unwanted pregnancy.

Mandatory dating violence assessments should also be the policy for all medical establishments serving adolescents, especially when treating teens for depression or other mental health problems. This could also be beneficial for the patients of facilities dealing with any type of pregnancy issue, as it may one day be found that dating violence interventions could prevent involvement in future unwanted pregnancy. Hospital policies should mandate that teens that are treated for injury in emergency rooms should be assessed by a social worker for involvement in dating violence.

Research

As indicated, this was a beginning study conducted to obtain information about the levels of dating violence and the possible predictors of dating violence in an adolescent population who chose to terminate a pregnancy. Further research is needed on many aspects related to this study.

Researchers need to examine the relationship between dating violence and psychosocial problems in greater detail in pregnancy termination patients to determine if this association is really related to dating violence or if it is more related to the fact that a pregnancy is being terminated. Future dating violence studies with pregnancy termination patients need to be conducted at different intervals in order to better separate out the effects of terminating a pregnancy on reporting dating violence behaviors. For instance, this study could have been strengthened if the measures were given to the participants on the day of their appointment and then again the day of their follow up exam. This approach would help to determine if the emotions related to pregnancy termination were

affecting participant reporting behaviors. Longitudinal studies tracking dating violence in pregnancy termination patients over time are desperately needed.

Future research needs to be designed to explore the relationship between dating violence and unwanted pregnancy in general. It is unknown if there was a relationship between dating violence and the occurrence of unwanted pregnancy in these participants. It was also unknown if the participants might be terminating their pregnancy because of their involvement in dating violence or in order to get away from a violent partner. Such dating violence studies could also measure relationship satisfaction with the co-conceiving partner as another way to gain information about the problems in the relationship, which may have contributed to the pregnancy and/or the decision to terminate it.

Future research on predictors of dating violence should be conducted on larger male only and female only samples of different groups of high-risk adolescents. Increasing the sample sizes would likely impact future research findings. Research efforts need to concentrate on developing long-term research projects that can follow children from kindergarten through high school to increase understanding about how dating violence develops across the lifespan. Research efforts must focus on generating information that can be used to help stop the development of patterns of violence in intimate relationships that are established in adolescence and possibly continued into adulthood.

Because a number of women in this sample reported concerning levels of dating violence, research efforts need to focus on determining how gender specific dating violence interventions for boys can effectively teach boys: that sexual coercion is never

acceptable, that they must accept dating boundaries set by their partners, that they must set their own dating boundaries, and that sexist attitudes that promote the idea that girls are sexual objects must be changed.

Research efforts to understand dating violence and how to prevent it must be increased overall. This study is an important first step to developing critical knowledge of the problem of dating violence. Dating should be safe. Prevention efforts based on empirical recommendations can help make dating a safe activity in the future.

References

Acock, A. (1997). Working with missing data. *Family Science Review, 10*, 77-101.

Ackard, D. M., & Neumark-Sztainer, D. (2002). Date violence and date rape among adolescents: Associations with disordered eating behaviors and psychological health. *Child Abuse & Neglect, 26*, 455-473.

Andersen, M. L. (2000). *Thinking about Women: Sociological Perspectives on Sex and Gender*. Needham Heights, MA: Allyn & Bacon.

Andreasen, N. C., & Black, D. W. (1995). *Introductory Textbook of Psychiatry*. Washington DC: American Psychiatric Press, Inc.

Andrews, J. A., Foster, S. L., Capaldi, D., & Hops, H. (2000). Adolescent and family predictors of physical aggression, communication, and satisfaction in young adult couples. *Journal of Consulting and Clinical Psychology, 68*, 195-208.

Arias, I., Samios, M., & O'Leary, K.D. (1987). Prevalence and correlates of physical aggression during courtship. *Journal of Interpersonal Violence, 2*, 82-90.

Avery-Leaf, S., Cascardi, M., O'Leary, K. D., & Cano, A. (1997). Efficacy of a dating violence prevention program on attitudes justifying aggression. *Journal of Adolescent Health, 21*, 11-17.

Barnes, G. E., Greenwood, L., & Sommer, R. (1991). Courtship violence in a Canadian sample of male college students. *Family Relations, 40*, 37-44.

Becky, D., & Farren, P. M. (1997). Teaching students how to understand and avoid abusive relationships. *School Counselor, 44*, 303-308.

Benda, B. B. & Corwyn, R. F. (2002). The effect of abuse in childhood and in adolescence on violence among adolescents. *Youth & Society, 33*, 339-366.

Bergman, L. (1992). Dating violence among high school students. *Social Work, 37*, 21-27.

Bethke, T., & DeJoy, D. (1993). An experimental study of factors influencing the acceptability of dating violence. *Journal of Interpersonal Violence, 8*, 36-51.

Billingham, R. E., & Notebaert, N. L. (1993). Divorce and dating violence revisited: Multivariate analyses using Straus's conflict tactics subscores. *Psychological Reports, 73*, 679-684.

Billingham, R. E., & Sack, A. R. (1986). Courtship violence and the interactive status of the relationship. *Journal of Adolescent Research, 1*, 305-325.

Bird, G. W., Stith, S. M., & Schladale, J. (1991). Psychological resources, coping strategies, and negotiation styles as discriminators of violence in dating relationships. *Family Relations, 40*, 45-50.

Bogler, R. (2002). Two profiles of schoolteachers: a discriminant analysis of job satisfaction. *Teacher and Teacher Education, 18,* 665-673.

Bookwala, J., Frieze, L. H., Smith, C., & Ryan, K. (1992). Predictors of dating violence: A multivariate analysis. *Violence and Victims, 7*, 297-311.

Borowsky, I. W., Ireland, M., Resnick, M. D. (2001). Adolescent suicide attempts: Risks and Protectors. *Pediatrics, 107*, 485-488.

Burcky, W., Reuterman, N., Kopsky, S. (1988). Dating violence among high school students. *The School Counselor, 35*, 353-358.

Burke, P. J., Stets, J. E., & Pirog-Good, M. A. (1988). Gender identity, self-esteem, and physical and sexual abuse in dating relationships. *Social Psychology Quarterly, 15*, 272-285.

Campbell, D. & Stanley, J. (1963) *Experimental and Quasi-experimental Designs for Research*. Boston: Houghton Mifflin Company.

Capaldi, D. M., & Clark, S. (1998). Prospective family predictors of aggression toward female partners for at-risk young men. *Developmental Psychology*, 34, 1175-1188.

Capaldi, D. M., Dishion, T. J., Stoolmiller, M., & Yoerger, K. (2001). Aggression toward female partners by at-risk young men: The contribution of male adolescent friendships. *Developmental Psychology, 37*, 61-73.

Carlson, B. E. (1987). Dating violence: A research review and comparison with spouse abuse. *Social Casework, 68*, 16-23.

Cascardi, M., Avery-Leaf, S., O'Leary, D., & Slep, A. M. S. (1999). Factor structure and convergent validity of the Conflict Tactics Scale in high school students. *Psychological Assessment, 11*, 546-555.

Cate, R., Henton, J., Koval, J., Christopher, F. S., & Lloyd, S. (1982). Premarital abuse: A social psychological perspective. *Journal of Family Issues, 3*, 79-90.

Chase, K.A., Treboux, D., & O'Leary, K. D. (2002). Characteristics of adolescents' dating violence. *Journal of Interpersonal Violence, 1*, 33-49.

Collins, R. (1975). *Conflict Sociology: Toward an Explanatory Science*. New York: Academic Press.

Corcoran, J. (1998). Ecological factors associated with adolescent pregnancy: A review of the literature. *Adolescence, 34,* 603-620.

Culross, P. L. (1999). Health care system responses to children exposed to domestic violence. *Future of Children, 9*, 111-121.

Downs, A. C., & Hillje, L. S. (1993). Historical and theoretical perspectives on adolescent sexuality: An overview. In T.P. Gullotta, G.R. Adams, & R. Montemayor. (Eds.), *Adolescent Sexuality* (pp. 1-33). Newbury Park, CA: Sege.

Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the lifespan: Findings from the adverse childhood experiences study. *Journal of the American Medical Association, 26*, 3089-3097.

Duggan, S., O'Brien, M., & Kennedy, J. K. (2001). Young adults' immediate and delayed reactions to simulated marital conflicts: Implications for intergenerational patterns of violence in intimate relationships. *Journal of Consulting and Clinical Psychology, 69*, 13-24.

Edwards, S. H., & Moscaritolo, M. (1989). *Violence is a Choice: A Curriculum of Violence Prevention Activities*. Plymouth, MA: South Shore Women's Center.

Ehrensaft, M. K., & Vivian, D. (1999). Is partner violence related to appraisals of coercive control by a partner? *Journal of Family Violence, 14*, 251-266.

Eiegenberg, H. M., & Kappeler, V. E. (2001). Legal aspects of battering. In Eigenberg, H. M. *Woman Battering in the United States: Till Death Do Us Part*. (pp. 197-268). Prospect Heights, IL: Waveland Press.

Flannery, D. J., Singer, M. I., & Wester, K. (2001). Violence exposure, psychological trauma, and suicide risk in a community of dangerously violent adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 435-445.

Foshee, V. A. (1996). Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Education Research, 11*, 275-286.

Foshee, V. A., Bauman, K. E., Arragia, X. B., Helms, R. W., Koch, G. G., & Linder, G. F. (1998). An evaluation of Safe Dates, an adolescent dating violence prevention program. *Journal of Public Health, 88*, 45-50.

Foshee, V. A., Bauman, K. E., & Fletcher, L. G. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and the Family, 61*, 331-342.

Foster, H. W. (2001). Teen pregnancy reduction: A continuing challenge. *Women's Health, 1*, 299-304.

Follingstad, D. R., Bradley, R. G., Laughlin, J. E., & Burke, L. (1999). Risk factors and correlates of dating violence: The relevance of examining frequency and severity levels in a college sample. *Violence and Victims, 14*, 365- 380.

Freeman, L. N., Mokros, H., & Poznanski, E. O. (1993). Violent events reported by normal urban school aged children: Characteristics and depression correlates. *Journal of the American Academy of Child and Adolescent Psychiatry, 32*, 419-424.

Furman, W., & Wehner, E. (1997). Adolescent romantic relationships: A developmental perspective. In S. Shulman & W. A. Collins, (Eds.). *Romantic Relationships in Adolescence: Developmental Perspectives. New Directions for Child Development, No. 78*. (pp. 21-36). San Francisco: Jossey-Bass.

Giordano, P. C., Millhollin, T. J., Cernovich, S. A., Pugh, M. D., & Rudolph, J. L. (1999). Delinquency, identity and women's involvement in relationship violence. *Criminology, 37*, 17-29.

Gray, L. T. (1991). Feminist practice and family violence. In M. Bricker-Jenkins, N. R. Hooyman, & N. Gottlieb (Eds.). Feminist Social Work Practice in Clinical Settings (pp. 19-32). Newbury Park, CA: Sage Publications.

Gwartney-Gibbs, P. A., Stockard, J., & Bohmer, S. (1987). Learning courtship aggression: The influence of parents, peers and personal experiences. *Family Relations, 36*, 276-282.

Hamby, S. L., Poindexter, V. C., & Gray-Little, B. (1996). Four measures of partner violence: Construct similarity and classification differences. *Journal of Marriage and the Family, 58*, 127-139.

Hanson, R. F. (2002). Adolescent dating violence: Prevalence and psychological outcomes (Invited Commentary). *Child Abuse & Neglect, 26*, 449-453.

Harned, M. S. (2001). Abused women or abused men? An examination of the context and outcomes of dating violence. *Violence and Victims, 16*, 269-285.

Henton, J., Cate, R., Koval, J., Lloyd, S., & Christopher, S. (1983). Romance and violence in dating relationships. *Journal of Family Issues, 4*, 467-482.

Herrmann, D. S., Jeffries, J., McWhirter, J. J., & Sipsas-Herrmann, A. (1997). The relationship between dimensional self-concept and juvenile gang involvement: Implications for prevention, intervention, and court referred diversion programs. (1997). *Behavioral Sciences and the Law, 15*, 181-194.

Hilton, N. Z., Harris, G. T., Rice, M. E., Krans, T. S., & Lavigne, L. (1998). Antiviolence education in high schools. *Journal of Interpersonal Violence, 13*, 726-742.

Jackson, S. M., Cram, F., & Seymour, F. W. (2000). Violence and sexual coercion in high school students' dating relationships. *Journal of Family Violence, 15*, 23-36.

Jezl, D. R., Molidor, C. E., & Wright, T. L. (1996). Physical, sexual and psychological abuse in high school dating relationships: Prevalence rates

and self-esteem issues. *Child & Adolescent Social Work Journal, 13*, 69-87.

Johnson, J. D., Adams, M. S., Ashburn, L., & Reed, W. (1995). Differential gender effects of exposure to rap music on African American adolescents' acceptance of teen dating violence. *Sex Roles, 33,* 597-605.

Kasian, M., & Painter, S. L. (1992). Frequency and severity of psychological abuse in a dating population. *Journal of Interpersonal Violence, 7*, 350-364.

Kelly, E. M., & Loesch, L. C. (1983). Abused wives: Perceptions during crisis counseling. *American Mental Health Counseling Association Journal, 5*, 132-140.

Klecka, W. R. (1980). *Discriminant Analysis- A Sage University Paper Series: Quantitative Applications in the Social Sciences*, (07-019). Newbury Park, CA: Sage Publications, Inc.

Koss, M. P., Gidyez, C. A., & Wisnieweski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology, 55*, 162-170.

Krieter, S. R., Krowchuk, D. P., Woods, C. R., Sinal, S. H., Lawless, M. R., & DuRant, R. H. (1999). Gender differences in risk behaviors among adolescents who experience date fighting. *Pediatrics, 104*, 1286-1298.

Lane, K. E., & Gwartney-Gibbs, P. A. (1985). Violence in the context of dating and sex. *Journal of Family Issues, 6*, 45-59.

Laursen, B. & Collins, W. A. (1994). Interpersonal conflict during adolescence. *Psychological Bulletin, 115*, 197-209.

LaVoie, F., Vezina, L., Piche, C., & Boivin, M. (1995). Evaluation of a prevention program for violence in teen dating relationships. *Journal of Interpersonal Violence, 10*, 516-524.

LeJeune, C., & LaFollette, V. (1994). Taking responsibility: Sex differences in reporting dating violence. *Journal of Interpersonal Violence, 9*, 133-140.

Leschied, A. W., Cummings, A. L., Van Brunschot, M., & Cunningham, A. (2001). Aggression on adolescent girls: Implications for policy, prevention and treatment*. Canadian Psychology, 42*, 200-215.

Levesque, R. J. R. (2000). Sexuality education: What adolescents' rights require. *Psychology, Public Policy and Law, 6(4),* 953-988.

Lewis, S. F., & Fremouw, W. (2001). Dating violence: A critical review of the literature. *Clinical Psychology Review, 21 (1)* 105-127.

Li, X., Howard, D., Stanton, B., Rachuba, L., & Cross, S. (1998). Distress symptoms among urban African American children and adolescents: A psychometric evaluation of the Checklist of Children's Distress Symptoms. *Archives of Pediatric & Adolescent Medicine, 156*, 569-578.

Loeber, R., Farrington, D. P., Stouthamer-Loeber, M., Van Kammen, M., & Welmoet, D. (1998). Multiple risk factors for multiproblem boys: Co-occurrence of delinquency, substance use, attention deficit, conduct problems, physical aggression, covert behavior, depressed mood, and shy/withdrawn behavior. In R. Jessor (Ed.) *New Perspectives on*

Adolescent Risk Behavior (pp. 90-149). New York: Cambridge University Press.

Makepeace, J. M. (1981). Courtship violence among college students. *Family Relations, 30*, 97-102.

Makepeace, J. M. (1986). Gender differences in courtship violence victimization. *Family Relations, 35*, 383-388.

Makepeace, J. M. (1987). Social factors and victim-offender differences in courtship violence. *Family Relations, 36*, 87-91.

Malik, S., Sorenson, S. B., & Aneshensel, C. S. (1997). Community and dating violence among adolescents: Perpetration and victimization. *Journal of Adolescent Health, 21*, 291-302.

Marshall, L. L., & Rose, P. (1988). Family of origin and courtship violence. *Journal of Counseling and Development, 66,* 414-418.

Mazza, J. J. & Reynolds, W. M. (1999). Exposure to violence in young inner-city adolescents: relationships with suicidal ideation, depression, and PTSD symptomatology. *Journal of Abnormal Child Psychology, 27*, 203-218.

McMahon, S. D., Grant, K. E., Compas, B. E., Thurm, A. E., & Ey, S. (2003). Stress and psychopathology in children and adolescents: Is there evidence of specificity? *Journal of Child Psychology and Psychiatry and Allied Disciplines, 44*, 107-133.

Molidor, C. E. (1995). Gender differences of psychological abuse in high school dating relationships. *Child & Adolescent Social Work Journal, 12,* 119-134.

Molidor, C., & Tolman, R. M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women, 4,* 180-194.

National Association of Social Workers (2003). *Social Work Speaks: NASW Policy Statements*. Washington DC: NASW Press.

Nugent, W., Sieppert, J., & Hudson, W. (2001). *Practice Evaluation for the 21st Century*. Belmont, CA: Wadsworth/Thompson Learning.

O'Keefe, M., & Treister, L. (1998). Victims of dating violence among high school students: Are the predictors different for males and females? *Violence Against Women, 4*, 195-223.

O'Keefe, M. (1997). Predictors of dating violence among high school students. *Journal of Interpersonal Violence, 12,* 546-569.

O'Keefe, M. (1998). Factors mediating the link between witnessing interparental violence and dating violence. *Journal of Family Violence, 13,* 39-57.

O'Keefe, N. K., Brockopp, K., & Chew, E. (1986). Teen dating violence. *Social Work, 46*, 3-8.

O'Leary, K. D., Barling, J., Arias, I., Rosenbaum, A., Malone, J., & Tyree, A. (1989). Prevalence and stability of physical aggression between spouses: A longitudinal analysis. *Journal of Consulting and Clinical Psychology, 57*, 263-268.

Pacifici, C., Stoolmiller, M., & Nelson, C. (2001). Evaluating a program for teenagers on sexual coercion: A differential effectiveness approach. *Journal of Consulting and Clinical Psychology, 69*, 552-559.

Paschall, M. J., & Hubbard, M. L. (1998). Effects of neighborhood and family

stressors on African American male adolescents self-worth and propensity for violent behavior. *Journal of Consulting and Clinical Psychology, 66*, 825-832.

Pelcovitz, D., Kaplan, S. J., DeRosa, R. R., Mandel, F. S., & Salzinger, S. (2000). Psychiatric disorders in adolescents exposed to domestic violence and physical abuse. *American Journal of Orthopsychiatry, 70*, 360-370.

Rickert, V. I., Vaughan, R. D., & Wiemann, C. M. (2002). Adolescent dating violence and date rape. *Current Opinion in Obstetrics and Gynecology, 14*, 495-500.

Riggs, D. R. (1993). Relationship problems and dating aggression. *Journal of Interpersonal Violence, 8,* 18-35.

Riggs, D. S., & Caufield, M. B. (1997). Expected consequences of male violence against their female dating partners. *Journal of Interpersonal Violence, 12,* 229-240.

Riggs, D. S., & O'Leary, K. D. (1996). Aggression between heterosexual dating partners: An examination of a causal model of courtship aggression. *Journal of Interpersonal Violence, 11*, 519-540.

Riggs, D. S., & O'Leary, K. D. (1989). Theoretical model of courtship aggression. In M. Pirog-Good, & J. Stets (Eds.), *Violence in Dating Relationships: Emerging Social Issues* (pp. 53-71). New York: Praeger.

Riggs, D. S., O'Leary, K. D., & Breslin, F. C. (1990). Multiple correlates of physical aggression in dating couples. *Journal of Interpersonal Violence, 5*, 61-73.

Reuterman, N. A., & Burcky, W. D. (1989). Dating violence in high schools: A profile of the victim. *Psychology, 26*, 1-9.

Ronfeldt, H. M., Kimerling, R., & Arias, I. (1998). Satisfaction with relationship power and the perpetration of dating violence. *Journal of Marriage and the Family, 60*, 70-79.

Roscoe, B., & Benaske, N. (1985). Courtship violence experienced by abused wives: Similarities in patterns of abuse. *Family Relations, 34*, 419-424.

Roscoe, B., & Kelsey, T. (1986). Dating violence among high school students. *Psychology, 23*, 53-59.

Roscoe, B., & Callahan, J. (1985). Adolescents' self-reports of violence in families and dating relationships. *Adolescence, 20*, 545-553.

Ryan, K. M. (1995). Do courtship-violent men have characteristics associated with a "battering personality?" *Journal of Family Violence, 10*, 99-120.

Ryan, K. M. (1998). The relationship between courtship violence and sexual aggression in college students. *Journal of Family Violence, 13*, 377-394.

Saunders, D. G. (1986). When battered women use violence: Husband abuse or self-defense? *Violence and Victims, 1*, 47-60.

Schwartz, M., O'Leary, S. G., & Kendziora, K. T. (1997). Dating aggression among high school students. *Violence and Victims, 9,* 295-305.

Sege, R., Stigol, L. C., Perry, C., Goldstein, R., & Spivak, H. (1996). Intentional injury surveillance in a primary care pediatric setting. *Archives of Pediatric and Adolescent Medicine, 150*, 277-283.

Sharpe, D., & Taylor, J. K. (1999). An examination of variables from a social-developmental model to explain physical and psychological dating violence. *Canadian Journal of Behavioural Science, 31*, 165-175.

Shavelson, R. J. (1996). *Statistical Reasoning for the Behavioral Sciences*. Boston: Allyn & Bacon.

Shook, N. J., Gerrity, D. A., Jurich, J., & Segrist, A. E. (2000). Courtship violence among college students: A comparison of verbally and physically abusive couples. *Journal of Family Violence, 15*, 1-23.

Sigelman, C. K., Berry, C. J., & Wiles, K. A. (1984). Violence in college students dating relationships. *Journal of Applied Social Psychology, 5,* 530-548.

Simons, R. L., Lin, K. H., & Gordon, L. C. (1998). Socialization in the family of origin and male dating violence: A prospective study. *Journal of Marriage and the Family, 60*, 467-478.

Slep, A. M. S., Cascardi, M., Avery-Leaf, S., & O'Leary, D. (2001). Two new measures of attitudes about the acceptability of teen dating aggression. *Psychological Assessment, 13*, 306-318.

Smith, J. P., & Williams, J. G. (1992). From abusive household to dating violence. *Journal of Family Violence, 7,* 153-165.

Smith, L. B., Adler, N. E., & Tschann, J. M. (1999). Underreporting sensitive behaviors: The case of young women's willingness to report abortion. *Health Psychology, 18*, 37-43.

So-Kum Tang, C., Critelli, J. W., & Porter, J. F. (1995). Sexual aggression and

victimization in dating relationships among Chinese college students. *Archives of Sexual Behavior, 24*, 47-54.

Steiner, H., & Feldman, S. S. (1996). General principles and special problems. In H. Steiner, (Ed.), *Treating Adolescents* (pp. 1-42). San Francisco: Jossey-Bass.

Stets, J. E. & Pirog-Good, M. A. (1987). Violence in dating relationships. *Social Psychology Quarterly, 50*, 237-246.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics (CT) scales. *Journal of Marriage and the Family, 41*, 75-86.

Straus, M. A., & Smith, C. (1990). Family patterns and primary prevention of family violence. In M. A. Straus, & R. J. Gelles (Eds.), *Physical Violence in American Families* (pp. 507-528). New Brunswick, NJ: Transaction.

Sugarman, D. B., & Hotling, G. T. (1989). Violent men in intimate relationships: An analysis of risk markers. *Journal of Applied and Social Psychology, 19*, 1034-1048.

Tabachnick, B. G., Fidell, L. S. (1989). *Using Multivariate Statistics*. New York: Harper & Row Publishers, Inc.

Tolman, R. (1989). The development and validation of a non-physical abuse scale. *Violence and Victims, 4*, 159-177.

Tontodonato, P., & Crew, B. K. (1992). Dating violence, social learning theory and gender: A multivariate analysis. *Violence and Victims, 7*, 3-14.

Valois, R. F., Oeltemann, J. E., Waller, J., & Hussey, J. R. (1999). Relationship between number of sexual intercourse partners and selected health risk

behaviors among public high school adolescents. *Journal of Adolescent Health, 25*, 328-335.

Watson, J. M., Cascardi, M., Avery-Leaf, S., & O'Leary, K.D. (2001). High school students responses to dating aggression. *Violence and Victims, 16*, 339-348.

Wekerle, C., & Wolfe, D. A. (1999). Dating violence in mid-adolescence: Theory, significance and emerging prevention issues. *Clinical Psychology Review, 19*, 435-456.

Wekerle, C., Wolfe, D. A., Hawkins, D. L., Pittman, A., Glickman, A., & Lovald, B. E. (2001). Childhood maltreatment, posttraumatic stress symptomatology and adolescent dating violence: Considering the value of adolescent perceptions of abuse and a trauma mediational model. *Development and Psychopathology, 13*, 847-871.

Williams, S. E., & Martinez, E. (1999). Psychiatric assessment of victims of adolescent dating violence in a primary care clinic. *Clinical Child Psychology and Psychiatry, 4*, 427-439.

Williamson, J. M., Borduin, C. M., & Howe, B. (1991). The ecology of adolescent maltreatment: A multilevel examination of adolescent physical abuse, sexual abuse and neglect. *Journal of Consulting and Clinical Psychology, 59*, 449-458.

Winton, C. (1995). *Frameworks for Studying Families.* Guilford, CT: The Dushkin Publishing Group, Inc.

Wodarski, J. S. (1997). *Research Methods for Clinical Social Workers*. New

York: Springer Publishing Co., Inc.

Wolfe, D. A., Scott, K., Reitzel-Jaffe, D., Wekerle, C., Grasley, C., Straatman, A. (2001a). Development and validation of the conflict in adolescent dating relationships inventory. *Psychological Assessment, 13*, 277-293.

Wolfe, D. A., Scott, K., Wekerle, C., & Pittman, A. (2001b). Child maltreatment: Risk of adjustment and dating violence in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 282-289.

Wolfe, D. A., Wekerle, C., Reitzel-Jaffe, D., & LeFebvre, L. (1998). Factors associated with abusive relationships among maltreated and nonmaltreated youth. *Development and Psychopathology*, 10, 61-85.

Wood, K., Maforah, F., & Jewkes, R. (1998). "He forced me to love him": Putting violence on adolescent sexual health agendas. *Social Science and Medicine, 47*, 233-242.

Zelenko, M. A., Huffman, L. C., Brown, Jr., B. W., Daniels, K., Lock, J., Kennedy, Q., & Steiner, H. (2001). The child abuse potential inventory and pregnancy outcome in expectant adolescent mothers. *Child Abuse & Neglect, 25*, 1481-1495.

Appendices

APPENDIX A- PATIENT CONSENT FORM- Adult (ages 18- 21) Patient Consent / Permission Form

"Dating Violence Study"

I, _____, agree to participate in the dating violence study that the health counselor has informed me about. This study is being conducted by the Knoxville Center for Reproductive Health with the permission of Morris Campbell, M.D. and the supervision of John Wodarski, Ph.D. Please contact Dr. Wodarski with questions or comments related to this study at 865.974.6481.

All patients age 21 and under who come into the clinic today will be asked to be a part of this study. I understand that participation in this study is completely voluntary, which means that I do not have to participate unless I want to. I can withdraw my consent at any time, without it affecting my services at the clinic and have the results of my participation returned to me, removed from the study or destroyed.

The information below has been explained to me verbally by a health counselor here at the clinic:

1. The main purpose of this study is to measure the levels of dating violence and life problems present in unmarried adolescent women faced with unwanted pregnancy. We hope to use these results to develop research projects and programs in the future that may help prevent and treat dating violence and unwanted pregnancy in adolescent women. We also hope these study results will help to improve existing reproductive health services for young women.

2. The discomforts, particularly anxieties that may occur as a result of this study are minimal.

3. Part of the results of this study may be used by a University of Tennessee College of Social Work doctoral student to complete the requirements of a dissertation. The results of this study may be typed up and submitted for publication. **No patient's name will never be written down or used in any report of this study. The name and location of this clinic will never be used in a published report of this study.**

4. The **risks** of this study are: a) risk of becoming uncomfortable or upset when asked to recall violent events of the past related to this pregnancy, b) risk of becoming uncomfortable or upset when asked questions about some of the problems that have been going on in your life, c) risk of an abusive episode being triggered by a violent partner who knows about the nature of the study. **Protections** from these risks will include: risks a and b)-access to master level social worker, registered nurse and/or medical doctor to provide help and community referrals to deal with negative emotions; risk c)-1) masters level social work crisis intervention and community referrals will be provided to protect against possible abuse and provide education to you about how to identify and eliminate abusive relationships, 2) the clinic advises patients not to tell an abusive partner about this study, to keep him from getting upset about your help with the study, and 3) the extremely confidential and secret nature of this study will keep abusive partners from finding out about your participation in this study, so the real potential for increased abuse will be minimal. Protections are built in to this study to protect you. These risks are not very likely to happen. The clinic workers are prepared to help you if you need help.

5. If you need help because you were a part of this study, a **social worker will help you.** A master's level clinical social worker is on site to provide extensive counseling and community referrals for any patient who becomes uncomfortable or upset by the study questions. In addition, there are several other BSSW level social work counselors and a master's level nurse practitioner and a medical doctor on site at this time to provide any additional mental health or medical services and referrals that you may need as a result of participation in this study. If you or your family needs help please ask a clinic worker to help you.

6. **Choice** is the most important purpose for this clinic. This clinic intends for your participation in this study to be a choice that you make. We hope you will want to be a part of this study because your opinions and experiences are very important to us. Your part in this study is important. We are very interested in finding out about your experiences so we can learn more about how to help young women if they have problems. We will not hold it against you if you do not want to be a part of this study.

7. **Confidentiality is very important to the people who are doing the study**. The results of this study will be confidential and never released to anyone with your name on them. No one except the counselors and the person in charge of this study will ever know that you agreed to participate in this study. No one outside the clinic will ever know that you came here today.

8. **Confidentiality is very important to this clinic**. To keep the study questions from causing emotional distress, the study will be kept completely confidential. The questions will be given only in the company of other female patients in the group room setting. Patients in the group room will not know you are helping with the study. No person outside this clinic besides you and the other study participants will even know about the study.

9. A copy of the results of this study can be made available to you. You may leave your number and address with the counselor at this time if you want to see the study when it is finished. You may contact the Knoxville Center for Reproductive Health if you have any questions about this project.

By signing below I agree that the purpose of this study has been satisfactorily explained to me. I understand that by signing below I am giving my voluntary consent to answer a set of questions related to dating violence and life problems. I will be given these questions to answer in the private setting of the group room and it will take approximately 30 minutes to answer these questions. I understand that it is my choice whether or not to participate in this study. This study will not affect the services that I am here to receive from this clinic. I understand that my decision about whether or not to participate in this study will not affect the services that I am here to receive from this clinic.

_____

Reproductive Health Counselor Name Patient Signature and Date

APPENDIX B-PARENTAL CONSENT FOR PARTICIPATION- Parental Consent / Permission Form

"Dating Violence Study"

I, _____, agree to allow_____, to participate in the dating violence study that the health counselor has informed me about. This study is being conducted by the Knoxville Center for Reproductive Health with permission of the clinic medical director Morris Campbell, M. D. and under supervision of John S. Wodarski, Ph.D. with the UT College of Social Work. Please contact Dr. Wodarski with questions or concerns related to this study at 865.974.6481. All patients age 21 and under who come into the clinic today will be asked to be a part of this study. I understand that participation in this study is completely voluntary, which means that I do not have to participate unless I want to. I can withdraw my consent at any time, without it affecting my services at the clinic and have the results of my participation returned to me, removed from the study or destroyed.
The information below has been explained to me verbally by a health counselor here at the clinic:

1. The main purpose of this study is to measure the levels of dating violence and life problems present in unmarried adolescent women faced with unwanted pregnancy. We hope to use these results to develop research projects and programs in the future that may help prevent and treat dating violence and unwanted pregnancy in adolescent women. We also hope these study results will help to improve existing reproductive health services for young women.

2. The discomforts, particularly anxieties that may occur as a result of this study are minimal.

3. I know that part of the results of this study may be used by a University of Tennessee College of Social Work doctoral student to complete the requirements of a dissertation. I know that the results of this study may be typed up and submitted for publication.

4. My daughter's name will never be written down or used in any report of this study. The name and location of this clinic will never be used in a published report of this study.

5. The **risks** of this study are: a) risk of your daughter becoming uncomfortable or upset when asked to recall violent events of the past related to this pregnancy, b) risk of your daughter becoming uncomfortable or upset when asked questions about some of the problems she has been experiencing in her life, c) risk of an abusive episode being triggered by a violent partner who knows about the nature of the study. **Protections** from these risks will include: risks a and b)-access to master level social worker, registered nurse and/or medical doctor to provide help and referrals to deal with negative emotions; risk c)-1) master's level social work crisis intervention and community referrals will be provided to protect against possible abuse and provide education to your daughter about how to identify and eliminate abusive relationships, 2) the clinic advises patients and family members not to tell an abusive partner about this study, to keep him from getting upset about the study, and 3) the extremely confidential and secret nature of this study will keep potential abusers from finding out about your daughter's participation in this study, so the real potential for increased abuse will be minimal.

6. If your daughter needs help because she was a part of this study, a **social worker will help you.** A master's level clinical social worker is on site to provide extensive counseling and

community referrals for any patient who becomes uncomfortable or upset by the study questions. In addition, there are several other BSSW level social work counselors and a masters level nurse practitioner and a medical doctor on site at this time to provide any additional mental health or medical services and referrals that you may need as a result of participation in this study. If you or your family needs help please ask a clinic worker to help you.

7. **Choice** is the most important purpose for this clinic. This clinic intends for your daughter's participation in this study to be a choice that you make together as a family. We hope you both will want to be a part of this study because your opinions and experiences are very important to us. Your daughter's part in this study is very important. We are very interested in finding out about adolescent experiences so we can learn more about how to help young women if they have problems. We will not hold it against you or your daughter if you do not want to be a part of this study.

8. **Confidentiality is very important to the people who are doing the study**. The results of this study will be confidential and never released to anyone with your daughter's name on them. No one except the counselors and the person in charge of this study will ever know that your daughter agreed to participate in this study. No one outside the clinic will ever know that you came here today.

9. **Confidentiality is very important to this clinic**. To keep the study questions from causing emotional distress, the study will be kept completely confidential. The questions will be given only in the company of other female patients in the group room setting. Patients in the group room will not know your daughter is helping with the study. No person outside this clinic besides you, your daughter and the other study participants will even know about the study.

10. A copy of the results of this study can be made available to you. You may leave your number and address with the counselor at this time if you want to see the study when it is finished. You may contact the Knoxville Center for Reproductive Health if you have any questions about this project.

By signing below I agree that the purpose of this study has been satisfactorily explained to me. I understand that by signing below I am giving my voluntary permission for my daughter to answer a set of questions related to dating violence and life problems. My daughter will be given these questions in the private setting of the group room and it will take approximately 30 minutes to answer these questions. I understand that it is my choice whether or not to allow my daughter to participate in this study. This study will not affect the services that my daughter and I are here to receive from this clinic.

_____ _____

Reproductive Health Counselor Name Parent Signature and Date

APPENDIX C-PATIENT ASSENT TO PARTICIPATE FORM

Adolescent (ages 12-17) Patient Assent Form
"Dating Violence Study"

I, _____, agree to be part of a social work study. I will be asked to answer questions about dating violence and some of the problems going on in my life. Nothing I say or write down will be told to anyone else. I can tell my counselor if I am upset and I want her to help me in some way. I know that my part in the study is voluntary. That means that I do not have to be a part of this study unless I want to. I know that I should not tell an abusive partner that I was a part of this study. That means that I should not tell my boyfriend about this study if he has ever been mean to me. Also, I can quit at anytime and that will be okay. My part in this study will not have anything to do with the service I am here to get from this clinic today. This study is not a part of the clinic treatments.

_____ _____

Counselor Name Patient Signature and Date

APPENDIX D- DEMOGRAPHIC DATA QUESTIONNAIRE SHEET

1. Age_____
2. Race (please circle): White Black Hispanic Asian American Indian Other_____
3. Number of Previous Pregnancies:_____
4. Number of Children_____ Number of Previous Terminations:_____
5. Religious Preference: Protestant Roman Catholic Jewish Muslim Other_____
6. Highest Level of Education: HS Incomplete HS Grad Some College College Grad Post Grad
7. Have you ever been treated for a sexually transmitted disease? YES NO
8. Have you ever seen a counselor, psychiatrist or psychologist before? YES NO
9. Do you smoke cigarettes? YES NO

APPENDIX E- CLINIC COUNSELOR CONFIDENTIALITY PLEDGE

Dating Violence Study

Principal Investigator: Gretchen E. Ely, MSW.

I, _____, understand that any and all information that I obtain about clients in connection with this research project is to remain completely confidential.

Confidentiality is to be specifically ensured in the following ways:

- Discussion of this project will not take place outside this clinic at any time.
- Records associated with this study will not be removed from this location by anyone other than the principal investigator.
- Study administration protocol will be followed rigorously to insure patient confidentiality.
- Participants in the project will not discuss any patient information with anyone other than the Principal Investigator or other members of the research team, nor discuss such information in public or in the presence of anyone outside the project.

I have received a copy of this confidentiality pledge and agree to all terms.

_____ _____
(Signature) (Date)

_____ _____
(Principal Investigator) (Date)

APPENDIX F & G- INTRODUCTORY DATING QUESTIONS AND CADRI

Introductory Dating Questions
1. How old were you when you began dating?_____
2. How many serious partners have you had since your first dating partner?_____
3. Was the person who got you pregnant your first sexual partner (circle one)?…..YES…..NO
4. If no, how many sexual partners have you had?_____
5. How old is the partner who got you pregnant?_____
6. What is the level of education of the partner who got you pregnant?_____
7. How many months were you involved with this partner?_____
8. Are you still together with the person who got you pregnant?…..YES…..NO
9. If you are not involved with that person anymore, did you break up because you became pregnant?…..YES…..NO
10. Does the person who got you pregnant know that you are pregnant?…..YES…..NO
11. Does the person who got you pregnant know that you are here today?…..YES…..NO
12. Does he support your decision to terminate this pregnancy?…..YES…..NO
13. Did he help you pay for the services you are getting here at the clinic today?…..YES…..NO
14. Was the person who got you pregnant ever abusive to you?…..YES…..NO
15. Did the person who got you pregnant try and prevent you from using birth control?…..YES…..NO

16. Have you had any other partners who were violent or abusive to you?…..YES…..NO

17. If yes, how many violent or abusive partners have you had in your lifetime?_____

18. Is someone violent trying to make you terminate this pregnancy?…YES…..NO

19. Are you terminating this pregnancy so you can end a relationship with someone violent?…YES…..NO

20. Have all your partners been the opposite sex?…..YES…..NO

21. Have you had any dating or sexual partners of the same sex?…..YES…..NO

22. If you have had a partner(s) of the same sex, how many same sex partners have you had?_____

23. Do you consider yourself to be primarily a lesbian or gay person?…..YES…..NO

24. Do you consider yourself to be primarily a bisexual person?…..YES…..NO

Conflict in Adolescent Relationships Inventory (CADRI) (female version)

The following questions ask you about things that may have happened to you when you were arguing with the partner of this pregnancy. **Think only about the partner of this pregnancy this time when you answer these questions.** Circle the number that matches the answer that best describes how often these things happened with the partner that got you pregnant. Please remember that all of your answers are confidential, which means that no one will know that you are the person who gave these answers. As a guide, use the following scale:

1. = NEVER: means that this activity did not occur

2. = SELDOM: means that this happened about 1 or 2 times in the relationship

3. = SOMETIMES: means that this happened about 3-5 times in the relationship

4. = OFTEN: means that this happened 6 or more times in the relationship

During a conflict with the partner of this pregnancy:

1. I gave reasons for my side of the argument……1	**2**	**3**	**4**	
He gave reasons for his side of the argument. …….1	2	3	4	
2. I touched him sexually when he didn't want me to. …..1	**2**	**3**	**4**	
He touched me sexually when I didn't want him to. ……1	2	3	4	
3. I tried to turn his friends against him. …1	**2**	**3**	**4**	
He tried to turn my friends against me. ……1	2	3	4	
4. I did something to make him feel jealous. …….1	**2**	**3**	**4**	
He did something to make me feel jealous. …….1	2	3	4	
5. I destroyed or threatened to destroy something he valued……..1	**2**	**3**	**4**	
He destroyed or threatened to destroy something I valued. …….1	2	3	4	
6. I told him that he was partly to blame. ……..1	**2**	**3**	**4**	
He told me he was partly to blame. ……..1	2	3	4	
7. I brought up something bad that he had done in the past……..1	**2**	**3**	**4**	
He bought up something bad that I had done in the past…...1	2	3	4	
I threw something at him…….1	**2**	**3**	**4**	
He threw something at me……1	2	3	4	
8. I said things just to make him angry….1	**2**	**3**	**4**	
He said things just to make me angry. …….1	2	3	4	
9. I gave reasons why I thought he was wrong. ….1	**2**	**3**	**4**	
He gave reasons why he thought I was wrong. ……1	2	3	4	
10. I agreed that he was partly right…….1	**2**	**3**	**4**	
He agreed that I was partly right……1	2	3	4	
11. I spoke to him in a hostile or mean tone of voice……1	**2**	**3**	**4**	
He spoke to me in a hostile or mean tone of voice. …….1	2	3	4	

12. I forced him to have sex when he didn't want to. ….1	**2**	**3**	**4**	
He forced me to have sex when I didn't want to…..1	2	3	4	
13. I offered a solution that I thought would make us both happy…1	**2**	**3**	**4**	
He offered a solution that he thought would make us both happy…..1	2	3	4	
14. I threatened him in an attempt to have sex with him. ……..1	**2**	**3**	**4**	
He threatened me in an attempt to have sex with me. …….1	2	3	4	
15. I put off talking until we calmed down……1	**2**	**3**	**4**	
He put off talking until we calmed down…..1	2	3	4	
16. I insulted him with put downs…….1	**2**	**3**	**4**	
He insulted me with put downs…….1	2	3	4	
17. I discussed the issue calmly. ….1	**2**	**3**	**4**	
He discussed the issue calmly……1	2	3	4	
18. I kissed him when he didn't want me to. ……1	**2**	**3**	**4**	
He kissed me when I didn't want him to……1	2	3	4	
19. I said things about him to his friends to turn them against him..1	**2**	**3**	**4**	
He said things about me to my friends to turn them against me……1	2	3	4	
20. I ridiculed or made fun of him in front of others. ….1	**2**	**3**	**4**	
He ridiculed or made fun of me in front of others…..1	2	3	4	
21. I told him how upset I was……1	**2**	**3**	**4**	
He told me how upset he was. …….1	2	3	4	
22. I kept track of who he was with and where he was…1	**2**	**3**	**4**	
He kept track of who I was with and where I was……1	2	3	4	
23. I blamed him for the problem……..1	**2**	**3**	**4**	
He blamed me for the problem……1	2	3	4	

24. I kicked, hit or punched him….1	**2**	**3**	**4**			
He kicked , hit or punched me……..1	2	3	4			
25. I left the room to cool down……1	**2**	**3**	**4**			
He left the room to cool down……..1	2	3	4			
26. I gave in, just to avoid conflict…….1		**2**	**3**	**4**		
He gave in, just to avoid conflict…..1	2	3	4			
27. I accused him of flirting with another girl…..1			**2**	**3**	**4**	
He accused me of flirting with another guy…...1	2	3	4			
28. I deliberately tried to frighten him. …1		**2**	**3**	**4**		
He deliberately tried to frighten me. ….1	2	3	4			
29. I slapped him or pulled his hair. …….1		**2**	**3**	**4**		
He slapped me or pulled my hair. …1	2	3	4			
30. I threatened to hurt him……1	**2**	**3**	**4**			
He threatened to hurt me……1	2	3	4			
31. I threatened to end the relationship…1		**2**	**3**	**4**		
He threatened to end the relationship.....1	2	3	4			
32. I threatened to hit him or throw something at him…1				**2**	**3**	**4**
He threatened to hit me or throw something at me….1		2	3	4		
33. I pushed shoved or shook him….1	**2**	**3**	**4**			
He pushed shoved or shook me……1	2	3	4			
34. I spread rumors about him…..1	**2**	**3**	**4**			
He spread rumors about me…..1	2	3	4			

APPENDIX H- CORRELATION MATRIX

Correlation Matrix for Dependent Variable and Independent Variables

		DEP	SE	MOM	DAD	STRESS	FRIENDS	SCHOOL	AGG	FAMILY	GUILT	THINK	THOUGHTS	LOSS	ALCOHOL	DRUG	DATEVIOL
DEP	Pearson Correlatio	1	.556**	.175	.386**	.654**	.309**	.239*	.321**	.275**	.490**	.535**	.415**	.369**	.234*	.334**	.209*
	Sig. (2-tailed)	.	.000	.064	.000	.000	.001	.021	.001	.003	.000	.000	.000	.000	.036	.006	.023
	N	118	117	113	100	110	111	93	99	114	104	107	100	100	81	67	118
SE	Pearson Correlatio	.556**	1	.175	.260**	.388**	.515**	.321**	.156	.279**	.471**	.375**	.366**	.313**	.235*	.444**	.226*
	Sig. (2-tailed)	.000	.	.063	.008	.000	.000	.002	.122	.003	.000	.000	.000	.002	.035	.000	.014
	N	117	119	114	102	110	113	95	100	115	105	108	101	100	81	67	119
MOM	Pearson Correlatio	.175	.175	1	.009	.170	.135	.243*	.163	.414**	.189	.090	-.003	.162	.096	.214	-.145
	Sig. (2-tailed)	.064	.063	.	.927	.080	.163	.020	.106	.000	.054	.357	.980	.107	.393	.081	.125
	N	113	114	114	100	107	109	91	100	111	104	106	99	100	81	67	114
DAD	Pearson Correlatio	.386**	.260**	.009	1	.452**	.220*	.157	.256*	.405**	.250*	.428**	.224*	.316**	.265*	.299*	.112
	Sig. (2-tailed)	.000	.008	.927	.	.000	.028	.160	.016	.000	.015	.000	.032	.003	.021	.017	.262
	N	100	102	100	102	97	100	82	88	101	94	95	91	89	76	63	102
STRESS	Pearson Correlatio	.654**	.388**	.170	.452**	1	.291**	.266*	.406**	.292**	.578**	.660**	.491**	.440**	.333**	.249*	.356**
	Sig. (2-tailed)	.000	.000	.080	.000	.	.002	.011	.000	.002	.000	.000	.000	.000	.003	.044	.000
	N	110	110	107	97	111	108	90	96	110	103	104	99	99	80	66	111
FRIENDS	Pearson Correlatio	.309**	.515**	.135	.220*	.291**	1	.443**	.197	.303**	.240*	.264**	.320**	.209*	.180	.378**	.115
	Sig. (2-tailed)	.001	.000	.163	.028	.002	.	.000	.051	.001	.015	.007	.001	.039	.111	.002	.227
	N	111	113	109	100	108	113	92	99	111	103	105	99	98	80	66	113
SCHOOL	Pearson Correlatio	.239*	.321**	.243*	.157	.266*	.443**	1	.295**	.372**	.254*	.447**	.318**	.310**	.250*	.202	.111
	Sig. (2-tailed)	.021	.002	.020	.160	.011	.000	.	.007	.000	.017	.000	.003	.004	.037	.129	.286
	N	93	95	91	82	90	92	95	82	93	88	90	86	85	70	58	95
AGG	Pearson Correlatio	.321**	.156	.163	.256*	.406**	.197	.295**	1	.280**	.306**	.370**	.475**	.362**	.258*	.285*	.099
	Sig. (2-tailed)	.001	.122	.106	.016	.000	.051	.007	.	.005	.002	.000	.000	.000	.024	.022	.330
	N	99	100	100	88	96	99	82	100	100	96	96	92	91	77	64	100
FAMILY	Pearson Correlatio	.275**	.279**	.414**	.405**	.292**	.303**	.372**	.280**	1	.370**	.254**	.123	.296**	.148	.312*	-.111
	Sig. (2-tailed)	.003	.003	.000	.000	.002	.001	.000	.005	.	.000	.009	.223	.003	.189	.010	.233
	N	114	115	111	101	110	111	93	100	116	105	106	100	99	81	67	116
SUICIDE	Pearson Correlatio	.472**	.391**	.067	.355**	.520**	.225*	.201	.404**	.274**	.475**	.335**	.442**	.386**	.062	.319*	.284**
	Sig. (2-tailed)	.000	.000	.515	.001	.000	.028	.074	.000	.007	.000	.001	.000	.000	.599	.011	.005
	N	95	96	96	87	95	95	80	91	96	96	95	92	91	75	63	96
GUILT	Pearson Correlatio	.490**	.471**	.189	.250*	.578**	.240*	.254*	.306**	.370**	1	.503**	.532**	.622**	.111	.446**	.346**
	Sig. (2-tailed)	.000	.000	.054	.015	.000	.015	.017	.002	.000	.	.000	.000	.000	.328	.000	.000
	N	104	105	104	94	103	103	88	96	105	105	104	99	97	80	66	105
THINK	Pearson Correlatio	.535**	.375**	.090	.428**	.660**	.264**	.447**	.370**	.254**	.503**	1	.564**	.620**	.251*	.209	.217*
	Sig. (2-tailed)	.000	.000	.357	.000	.000	.007	.000	.000	.009	.000	.	.000	.000	.024	.092	.024
	N	107	108	106	95	104	105	90	96	106	104	108	100	99	80	66	108
THOUGHTS	Pearson Correlatio	.415**	.366**	-.003	.224*	.491**	.320**	.318**	.475**	.123	.532**	.564**	1	.599**	.260*	.320**	.210*
	Sig. (2-tailed)	.000	.000	.980	.032	.000	.001	.003	.000	.223	.000	.000	.	.000	.021	.009	.035
	N	100	101	99	91	99	99	86	92	100	99	100	101	96	78	65	101
LOSS	Pearson Correlatio	.369**	.313**	.162	.316**	.440**	.209*	.310**	.362**	.296**	.622**	.620**	.599**	1	.213	.454**	.094
	Sig. (2-tailed)	.000	.002	.107	.003	.000	.039	.004	.000	.003	.000	.000	.000	.	.059	.000	.353
	N	100	100	100	89	99	98	85	91	99	97	99	96	100	79	66	100
ALCOHOL	Pearson Correlatio	.234*	.235*	.096	.265*	.333**	.180	.250*	.258*	.148	.111	.251*	.260*	.213	1	.402**	.009
	Sig. (2-tailed)	.036	.035	.393	.021	.003	.111	.037	.024	.189	.328	.024	.021	.059	.	.001	.935
	N	81	81	81	76	80	80	70	77	81	80	80	78	79	81	65	81
DRUG	Pearson Correlatio	.334**	.444**	.214	.299*	.249*	.378**	.202	.285*	.312*	.446**	.209	.320**	.454**	.402**	1	.029
	Sig. (2-tailed)	.006	.000	.081	.017	.044	.002	.129	.022	.010	.000	.092	.009	.000	.001	.	.813
	N	67	67	67	63	66	66	58	64	67	66	66	65	66	65	67	67
DATEVIOL	Pearson Correlatio	.209*	.226*	-.145	.112	.356**	.115	.111	.099	-.111	.346**	.217*	.210*	.094	-.009	.029	1
	Sig. (2-tailed)	.023	.014	.125	.262	.000	.227	.286	.330	.233	.000	.024	.035	.353	.935	.813	.
	N	118	119	114	102	111	113	95	100	116	105	108	101	100	81	67	120

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

APPENDIX I-MPSI ADAPTED INTO MAAS

MPSI

WALMYR Publishing Co.
PO Box 24779
Tempe, AZ 85285-4779

THE MULTI-PROBLEM SCREENING INVENTORY

INSTRUCTIONS

This questionnaire is designed to obtain information about a wide range of possible problem areas. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
x = Does Not Apply

You may discover that some of the items do not apply to you or your personal situation. For any such item, please enter an x or X but ***do not leave any item blank***.

When you begin to complete the items on this questionnaire you will see that you can very easily make yourself look as good or as bad as you wish. ***Please do not do that.*** It is extremely important for you to provide the most accurate answers possible even though you may feel embarrassed or uncomfortable. If you provide incorrect or misleading information to those who are trying to assist you, it will be very difficult to provide you with the help that you are seeking.

Please Print Your

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Age: _____ Gender: ___ Male ___ Female Race: _____

SSAN: _____ Today's Date: _____

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: DEPRESSION

1. _____ I feel powerless to do anything about my life.
2. _____ I feel blue.
3. _____ I have crying spells.
4. _____ It is easy for me to enjoy myself. *
5. _____ I have a hard time getting started on things that I need to do.
6. _____ I get very depressed.
7. _____ I feel there is always someone I can depend on when things get tough. *
8. _____ I feel that the future looks bright for me. *
9. _____ I feel downhearted.
10. _____ I feel that I am needed. *
11. _____ I feel that I am appreciated by others. *
12. _____ I enjoy being active and busy. *

SUBSCALE: SELF-ESTEEM

13. _____ I think my friends find me interesting. *
14. _____ I think I have a good sense of humor. *
15. _____ I feel very self-conscious when I am with strangers.
16. _____ I feel that if I could be more like other people I would have it made.
17. _____ I feel that people have a good time when they are with me. *
18. _____ I feel that people do not enjoy my company.
19. _____ I feel I get pushed around more than others.
20. _____ I think I am a rather nice person. *
21. _____ I feel that people really like me very much. *
22. _____ I feel that I am a likable person. *
23. _____ I am afraid I will appear foolish to others.
24. _____ My friends think very highly of me. *

SUBSCALE: PARTNER RELATIONSHIP PROBLEMS

25. _____ My partner is affectionate enough. *
26. _____ My partner treats me badly.
27. _____ My partner really cares for me. *
28. _____ I feel that I would not choose the same partner if I had it to do over again.
29. _____ I feel that I can really trust my partner. *
30. _____ I feel that our relationship is breaking up.
31. _____ My partner really does not understand me.
32. _____ I feel that our relationship is a good one. *
33. _____ Ours is a very happy relationship. *
34. _____ Our life together is dull.
35. _____ We have a lot of fun together. *
36. _____ My partner does not confide in me.
37. _____ Ours is a very close relationship. *

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: SEXUAL DISCORD

38. _____ I feel that my partner enjoys our sex life. *
39. _____ Our sex life is very exciting. *
40. _____ Sex is fun for my partner and me. *
41. _____ Sex with my partner has become a chore for me.
42. _____ I feel that our sex is dirty and disgusting.
43. _____ Our sex life is monotonous.
44. _____ When we have sex, it is too rushed and hurriedly completed.
45. _____ I feel that our sex life is lacking in quality.
46. _____ My partner is sexually very exciting. *
47. _____ I enjoy the sex techniques that my partner likes or uses. *
48. _____ I feel that my partner wants too much sex from me.
49. _____ I think that our sex life is wonderful. *

SUBSCALE: PROBLEMS WITH MY CHILD

50. _____ My child gets on my nerves.
51. _____ I get along well with my child. *
52. _____ I feel that I can really trust my child. *
53. _____ I dislike my child.
54. _____ My child is well behaved. *
55. _____ My child is too demanding.
56. _____ I wish I did not have this child.
57. _____ I really enjoy my child. *
58. _____ I have a hard time controlling my child.
59. _____ My child interferes with my activities.
60. _____ I resent my child.
61. _____ I think my child is terrific. *
62. _____ I hate my child.

SUBSCALE: PROBLEMS WITH MOTHER

63. _____ My mother is very patient with me. *
64. _____ I really like my mother. *
65. _____ I like being with my mother. *
66. _____ I feel like I do not love my mother.
67. _____ My mother is very irritating.
68. _____ I feel very angry toward my mother.
69. _____ I feel violent toward my mother.
70. _____ I feel proud of my mother. *
71. _____ I wish my mother was more like others I know.
72. _____ My mother does not understand me.
73. _____ I can really depend on my mother. *
74. _____ I feel ashamed of my mother.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: PROBLEMS WITH FATHER

75. _____ My father gets on my nerves.
76. _____ I get along well with my father. *
77. _____ I feel that I can really trust my father. *
78. _____ I dislike my father.
79. _____ My father's behavior embarrasses me.
80. _____ My father is too demanding.
81. _____ I wish I had a different father.
82. _____ I really enjoy my father. *
83. _____ My father puts too many limits on me.
84. _____ My father interferes with my activities.
85. _____ I resent my father.
86. _____ I think my father is terrific. *
87. _____ I hate my father.

SUBSCALE: PERSONAL STRESS

88. _____ I feel very panicked.
89. _____ I feel like I am on the verge of a total collapse.
90. _____ I feel that I am losing control of my life.
91. _____ I feel that I am near a breaking point.
92. _____ I feel wound up like a coiled spring.
93. _____ I feel that I cannot keep up with all the demands on me.
94. _____ I feel very much behind in my work.
95. _____ I feel tense and angry with those around me.
96. _____ I feel I must race from one task to the next.
97. _____ I feel that I just cannot keep up with everything.
98. _____ I feel as tight as a drum.
99. _____ I feel very much on edge.

SUBSCALE: PROBLEMS WITH FRIENDS

100. _____ I get along very well with my friends. *
101. _____ My friends act like they do not care about me.
102. _____ My friends treat me badly.
103. _____ My friends really seem to respect me. *
104. _____ I do not feel like I am "part of the group" with my friends.
105. _____ My friends are a bunch of snobs.
106. _____ My friends understand me. *
107. _____ My friends seem to like me very much. *
108. _____ I really feel "left out" by my friends.
109. _____ I hate my present group of friends.
110. _____ My friends seem to like having me around. *
111. _____ I really like my present group of friends. *
112. _____ I really feel that I am disliked by my friends.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: PROBLEMS WITH NEIGHBORS

113. _____ I really feel that I am disliked by my neighbors.
114. _____ I wish I had a different group of neighbors.
115. _____ My neighbors are very nice to me. *
116. _____ My neighbors seem to look up to me. *
117. _____ My neighbors think I am important to them. *
118. _____ My neighbors are a real source of pleasure to me. *
119. _____ My neighbors do not seem to even notice me.
120. _____ I wish I were not part of this neighborhood.
121. _____ My neighbors regard my ideas and opinions very highly. *
122. _____ I feel like I am an important member of my neighborhood. *
123. _____ I cannot stand to be around my neighbors.
124. _____ My neighbors seem to look down on me.
125. _____ My neighbors really do not interest me.

SUBSCALE: PROBLEMS WITH SCHOOL

126. _____ I hate school.
127. _____ I enjoy my school work and studies. *
128. _____ I put off studies at school until the last minute.
129. _____ My school homework is very boring.
130. _____ School is not for study, it is for parties and play!
131. _____ I study very hard at school. *
132. _____ I think I am a good student at school. *
133. _____ I think my school work will help my future. *
134. _____ I really do pretty shoddy work at school.
135. _____ I feel I learn a great deal at school. *

SUBSCALE: AGGRESSION

136. _____ When I have to, I really do not mind punching someone out.
137. _____ I get into fights.
138. _____ When I hurt someone physically it really does not bother me.
139. _____ I am quick to let people know they cannot walk all over me.
140. _____ I push others around before they have a chance to push me around.
141. _____ People tell me I have a bad temper.
142. _____ I hurt people before they can hurt me.
143. _____ I threaten people with a fight.
144. _____ I like it when others are afraid of me.
145. _____ If punches are thrown, mine go first!

SUBSCALE: PROBLEMS WITH WORK ASSOCIATES

146. _____ I get along very well with my work associates. *
147. _____ My work associates act like they do not care about me.
148. _____ My work associates treat me badly.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

149. _____ My work associates really seem to respect me. *
150. _____ I do not feel like I am "part of the group" with my work associates.
151. _____ My work associates are a bunch of snobs.
152. _____ My work associates understand me. *
153. _____ My work associates seem to like me very much. *
154. _____ I really feel "left out" by my work associates.
155. _____ I hate my present group of work associates.
156. _____ My work associates seem to like having me around. *
157. _____ I really like my work associates. *

SUBSCALE: FAMILY RELATIONSHIP PROBLEMS

158. _____ There is too much hatred in my family.
159. _____ Members of my family are really good to one another. *
160. _____ My family is well respected by those who know us. *
161. _____ There seems to be a lot of friction in my family.
162. _____ There is a lot of love in my family. *
163. _____ Members of my family get along well together. *
164. _____ Life in my family is generally unpleasant.
165. _____ My family is a great joy to me. *
166. _____ I feel proud of my family. *
167. _____ Other families seem to get along better than mine.
168. _____ My family is a real source of comfort to me. *
169. _____ I feel "left out" of my family.
170. _____ My family is an unhappy one.

SUBSCALE: SUICIDAL THOUGHTS

171. _____ I think about ending my life.
172. _____ My life is so grim that I have considered ending it.
173. _____ I think about committing suicide.
174. _____ I feel that everyone would be better off if I were dead.
175. _____ I actually think about different ways that I could kill myself.
176. _____ I have actually decided that I am going to take my own life and I now think about my final plans for doing that.
177. _____ I feel that it is useless for me to continue living.
178. _____ I think about finding relief or peace by taking my own life.
179. _____ I feel that the only way to end my shame is to end my life.
180. _____ I feel that my agony is too great for me to continue living.
181. _____ I feel that my life is over and I may as well end it.

SUBSCALE: NON-PHYSICAL ABUSE

182. _____ My partner belittles me.
183. _____ My partner demands obedience to his or her whims.
184. _____ My partner becomes surly and angry if I say he or she is drinking too much.
185. _____ My partner demands that I perform sex acts that I do not enjoy or like.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

186. _____ My partner becomes very upset if my work is not done when he or she thinks it should be.
187. _____ My partner does not want me to have any friends.
188. _____ My partner tells me I am ugly and unattractive.
189. _____ My partner tells me I really could not manage or take care of myself without him or her.
190. _____ My partner acts like I am his or her personal servant.
191. _____ My partner insults or shames me in front of others.
192. _____ My partner becomes very angry if I disagree with his or her point of view.
193. _____ My partner is stingy in giving me money.
194. _____ My partner belittles me intellectually.

SUBSCALE: PHYSICAL ABUSE

195. _____ My partner tries to choke or strangle me.
196. _____ My partner knocks me down and then kicks or stomps me.
197. _____ My partner twists my fingers, arms or legs.
198. _____ My partner throws dangerous objects at me.
199. _____ My partner bites or scratches me so badly that I bleed or have bruises.
200. _____ My partner violently pinches or twists my skin.
201. _____ My partner hurts me badly while we are having sex.
202. _____ My partner injures my breasts or genitals.
203. _____ My partner tries to suffocate me with pillows, towels, or other objects.
204. _____ My partner pokes or jabs me with pointed objects.
205. _____ My partner has broken one or more of my bones.
206. _____ My partner kicks my face and head.

SUBSCALE: FEARFULNESS

207. _____ I experience a great deal of fear.
208. _____ A sense of terror washes over my entire body.
209. _____ I have frightening nightmares.
210. _____ My dreams are very frightening.
211. _____ I become afraid very easily.
212. _____ I feel panic stricken and terrified.
213. _____ I am stricken with a sense of paralyzing fear.
214. _____ Panic and fear disrupt what I am trying to do.
215. _____ I am frightened very easily.
216. _____ I am very afraid that I will be hurt or damaged.
217. _____ I become afraid for no apparent reason.
218. _____ I am terrified that something awful is going to happen.
219. _____ I break out in cold sweats of fear and panic.
220. _____ I am terrified that something really bad will happen to me.
221. _____ I become so afraid that I feel I am going to die.
222. _____ I become so afraid that I can hardly move.
223. _____ I wake up at night feeling afraid.
224. _____ Fear courses through my body.
225. _____ I wake up at night in a state of terror.

ANSWER KEY

1 = None of the time	5 = A good part of the time
2 = Very rarely	6 = Most of the time
3 = A little of the time	7 = All of the time
4 = Some of the time	X = Does not apply

SUBSCALE: IDEAS OF REFERENCE

226. _____ I think people talk about me behind my back.
227. _____ People are definitely "out to get me".
228. _____ I think people are plotting against me.
229. _____ People keep staring at me.
230. _____ People who are supposed to be my friends are really out to stab me in the back.
231. _____ Various people keep talking about me.
232. _____ I think there are people who are plotting against me.
233. _____ People are out to get me because they are jealous of me.
234. _____ Secret agents keep spying on me.
235. _____ People sneak around and try to cause me trouble.
236. _____ People are trying to hurt me.
237. _____ People who call themselves my friends try to pull me down because they would love to see me fail.
238. _____ People are plotting to kill me.
239. _____ I can feel people watching me.
240. _____ Government agents are plotting my downfall.
241. _____ My boss would really like to see me mess up.
242. _____ People around me really resent by ability and talent.
243. _____ People keep trying to invade my privacy.
244. _____ There are people who would really like to get rid of me.
245. _____ People are trying to make me look foolish.

SUBSCALE: PHOBIAS

246. _____ I feel extremely nervous when I must go to high places or look down from them.
247. _____ I am extremely frightened or nervous when I am in crowds of people.
248. _____ I feel panicked when I must cross over bridges or go through tunnels.
249. _____ I am terrified when I enter small rooms or closed spaces.
250. _____ I am extremely nervous when I fly in airplanes.
251. _____ I am terrified of driving in even moderate traffic.
252. _____ I am extremely nervous when I am in the presence of strangers.
253. _____ I am terrified of being alone.
254. _____ I am extremely nervous, even panicked, when I meet people for the first time.
255. _____ I feel completely incapacitated at the thought of public speaking.
256. _____ I feel afraid to go out of my house alone.
257. _____ I feel afraid in open spaces or in the streets.
258. _____ I feel afraid I will faint in public.
259. _____ I am comfortable traveling on buses, subways or trains. *
260. _____ I feel nervousness or shakiness inside.
261. _____ I feel comfortable in crowds, such as shopping or at a movie. *
262. _____ I feel comfortable when I am left alone. *
263. _____ Due to my fears, I unreasonably avoid certain animals, objects or situations.
264. _____ Due to my fears, I avoid social situations, whenever possible.
265. _____ Due to my fears, I avoid being alone, whenever possible.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: FEELINGS OF GUILT

266. _____ I seem to feel guilty for no good reason.
267. _____ When things go wrong, I feel I should apologize even if it is not my fault.
268. _____ When things do not go right I usually accept the blame for them.
269. _____ I am usually the one who apologizes for anything.
270. _____ I have this nagging feeling that I have done something wrong.
271. _____ I have the feeling I should be punished even when I have done nothing for which to be punished.
272. _____ I have the feeling that I have done something terrible.
273. _____ I feel very guilty and ashamed.
274. _____ Deep inside, I feel that I am really a "bad" person.
275. _____ I feel that people would be ashamed of me if they really knew me very well.

SUBSCALE: PROBLEMS WITH WORK

276. _____ My job is very boring.
277. _____ I hate my job.
278. _____ I cannot stand my boss.
279. _____ My boss is a fool.
280. _____ I really like my job. *
281. _____ I think I am good at my job. *
282. _____ I get to work on time. *
283. _____ I like to "goof off" on the job.
284. _____ The best part of my job is coffee breaks, lunch, and vacations.
285. _____ I work very hard at my job and I am very conscientious about doing it well. *

SUBSCALE: CONFUSED THINKING

286. _____ I have difficulty keeping my thoughts straight.
287. _____ My thinking becomes confused.
288. _____ I cannot seem to keep things straight in my mind.
289. _____ There are times when my mind plays tricks on me.
290. _____ Some of the strangest ideas just pop into my mind.
291. _____ There are times when my thinking does not seem to work right.
292. _____ I worry about the way my mind seems strange.

SUBSCALE: DISTURBING THOUGHTS

293. _____ I have ideas and thoughts that disturb me greatly.
294. _____ Some of my thoughts are frightening to me.
295. _____ I think about ugly or horrible things.
296. _____ There are times when I have very strange and disturbing thoughts.
297. _____ I cannot get certain bad thoughts out of my mind.
298. _____ Disturbing ideas come to me and I cannot get rid of them.
299. _____ I worry about the horrible thoughts that I have.
300. _____ Ugly or horrible thoughts rush into my mind.
301. _____ I just cannot get certain bad thoughts out of my mind.

ANSWER KEY

1 = None of the time
2 = Very rarely
3 = A little of the time
4 = Some of the time
5 = A good part of the time
6 = Most of the time
7 = All of the time
X = Does not apply

SUBSCALE: MEMORY LOSS

302. _____ I forget where I put my keys, glasses, or other objects that I use daily.
303. _____ There are times when I forget my name.
304. _____ I forget what day it is.
305. _____ I forget important dates, addresses, or phone numbers that I should remember with ease.
306. _____ I have difficulty remembering things that I should easily remember.
307. _____ There are times when I actually forget my own address.
308. _____ I forget important things about my work or school.
309. _____ My memory seems to fail me.

SUBSCALE: ALCOHOL ABUSE

310. _____ When I have a drink with friends, I usually drink more than they do.
311. _____ My drinking causes problems with my family or friends.
312. _____ My drinking causes problems with my work.
313. _____ After I have been drinking, I cannot remember things that happened.
314. _____ After I have been drinking, I get the shakes.
315. _____ When I am drinking, I have three or fewer drinks. *
316. _____ I drink to calm my nerves or make me feel better.
317. _____ I drink when I am alone.
318. _____ I drink so much that I pass out.
319. _____ My drinking interferes with obligations to my family or friends.
320. _____ I have one or more drinks when things are not going well for me.
321. _____ I have one or more drinks before noon.
322. _____ My friends avoid me when I am drinking.
323. _____ My personal life gets very troublesome when I drink.
324. _____ I drink several times a week.

SUBSCALE: DRUG USE

325. _____ I take drugs to calm my nerves or make me feel better.
326. _____ When I take drugs with friends, I usually take more than they do.
327. _____ My drug use causes problems with my family or friends.
328. _____ My drug use causes problems with my work.
329. _____ I take drugs when I am alone.
330. _____ My drug use interferes with obligations to my family or friends.
331. _____ I take drugs when things are not going well for me.
332. _____ My friends avoid me when I take drugs.
333. _____ My personal life gets very troublesome when I use drugs.
334. _____ I take drugs several times a week.

MPSI SUBSCALE SCORING BLANK

Subscale Name	A Total Items	B Items Used	C Item Sum	D (C - B) Sum-Used	E D*100/(B*6) Score
Depression	12	____	____	_____	_____
Self-Esteem	12	____	____	_____	_____
Partner Problems	13	____	____	_____	_____
Sexual Discord	12	____	____	_____	_____
Child Problems	13	____	____	_____	_____
Mother Problems	12	____	____	_____	_____
Father Problems	13	____	____	_____	_____
Personal Stress	12	____	____	_____	_____
Friend Problems	13	____	____	_____	_____
Neighbor Problems	13	____	____	_____	_____
School Problems	10	____	____	_____	_____
Aggression	10	____	____	_____	_____
Work Associates	12	____	____	_____	_____
Family Problems	13	____	____	_____	_____
Suicide	11	____	____	_____	_____
Non-Physical Abuse	13	____	____	_____	_____
Physical Abuse	12	____	____	_____	_____
Fearfulness	19	____	____	_____	_____
Ideas of Reference	20	____	____	_____	_____
Phobias	20	____	____	_____	_____
Guilt	10	____	____	_____	_____
Work Problems	10	____	____	_____	_____
Confused Thinking	7	____	____	_____	_____
Disturbing Thoughts	9	____	____	_____	_____
Memory Loss	8	____	____	_____	_____
Alcohol Abuse	15	____	____	_____	_____
Drug Abuse	10	____	____	_____	_____

VITA

Gretchen E. Ely was born in Knoxville, TN on November 14, 1970. She was raised in Knoxville. She graduated from Bearden High School in 1989. From there she attended the University of Tennessee and earned a B. A. in speech communication in 1993. From there she attended Washington University in St. Louis and earned a master's degree in social work in 1998. After graduating from her MSW program, she returned to Knoxville to work for the UT Social Work Office of Research and Public Service. She began her doctoral program in 1999 and completed the program in December 2003.