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Adolescent dating violence: school nurses' perceptions and practices

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Adolescent Dating Violence: School Nurses’ Perceptions and Practices

by

Jagdish Khubchandani

Submitted to the Graduate Faculty as a partial fulfillment of the requirements for the Doctor of Philosophy Degree in Health Education

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December 2010
This study assessed the perceptions and practices of school nurses regarding adolescent dating violence. Specifically, the study assessed whether public schools have a protocol for responding to an incident of adolescent dating violence (ADV), the number of victims of ADV assisted by high school nurses in the past 2 years, high school nurses knowledge on ADV, and the barriers to assisting victims of ADV. Additionally, the study assessed the school nurse’s perceptions of the roles played by various school personnel in relation to assisting victims of ADV.

The membership list of the National Association of School Nurses was used to identify a national random cross-sectional sample of high school nurses in the United States (N = 750). A valid and reliable survey instrument was developed and a three-wave postal mailing procedure was used to maximize the return rate. The return rate was 57%.

The majority (86.4%) of school nurses reported that they do not have a protocol in their schools to respond to an incident of adolescent dating violence. Additionally, the majority of nurses reported that in the past 2 years, training to assist victims of adolescent dating violence has not been provided to personnel in their schools (88.1%), their school
does not conduct periodic student surveys that include questions on teen dating abuse behaviors (71.5%), and their school does not have a committee that meets periodically to address health and safety issues which include teen dating abuse (81.4%).

The majority (55.3%) of high school nurses reported assisting a victim of adolescent dating violence in the past 2 years. The most common types of assistance provided was referral to a school counselor, primary care to the victim, referral of the victim to a school social worker, and referral of the student to legal authorities. High school nurse’s knowledge on adolescent dating violence was limited. The characteristics of high school nurses who were more likely to assist victims of adolescent dating violence included: being certified as a nurse, perceiving high extent of adolescent dating violence problems in school, and serving no more than 1 school.

Schools do not find adolescent dating violence a high priority. In addition, nurses found a number of barriers (lack of training on adolescent dating violence, lack of time, and lack of private space etc.) to assisting student victims of adolescent dating violence. Schools need to establish a means for assessing the status of ADV in their student population. In addition, schools need to provide in-service education for school personnel regarding prevention, assessment and interdiction of ADV.
This dissertation is dedicated to my father Dr. Nihal Khubchandani and to my uncle Mr. Mohan Tahiliani for instilling humanitarian values in me, and for their unparalleled support in all my academic endeavors. I earnestly and truly thank my mother Mrs. Draupadi Khubchandani for motivating me to work harder. I must acknowledge my brother-in-law Dr. Manish Rijhwani and my sister Dr. Lata Rijhwani for convincing me that I am more powerful than my limitations. My tenure at the University of Toledo has been an extremely fulfilling experience. I thank the faculty, staff and students at the University of Toledo for their kindness. I express my special gratitude towards Dr. Timothy R. Jordan, Dr. Amy Thompson, and Dr. Gretchen E. Tietjen for the numerous academic opportunities they have provided me. My collaborators JoAnn Klienfelder, Molly McKinney, Jamie Dowling, Michele Bryant, Phil Welch, Robert Braun, Adam Mrdjenovich and Michael Wiblishauer deserve a special mention for their patience, guidance and warmth while I worked with them. My cousin Deepak Chandnani has been my technical advisor for the past one year and I thank him for his patience with my mediocre skills with computers. Finally, I thank the people of the United States for graceully providing me everything that I needed. For their love, support, magnanimity, and encouragement which have been therapeutic every now and then, I remain humbled and indebted to the people of the United States.
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Chapter 1

Introduction

This chapter includes the following sections: Introduction, Statement of the Problem, Statement of Purpose, Research Questions, Hypotheses, Variables, Definitions of Terms, Delimitations of the Study, and Limitations of the Study.

1.1. Introduction

Dating and the exploration of nascent romantic relationships should be a part of the normal progression towards adulthood for adolescents. More than half of US adolescents reported being involved in a special romantic relationship within the past 18 months (Carver, Joyner, & Udry, 2003). Periodically these romantic relationships are marked by adolescent dating violence. Adolescents might be vulnerable to such violence as they are investigating and experiencing different patterns of adult relationships which may mean that they are probably not aware of the interactions within a dating relationship that are unacceptable to their peers or to their community. Adolescents sometimes believe that unhealthy relationships are the norm (CDC, 2009). Some relationships seen on TV, in the movies, and in magazines are unrealistic or unhealthy examples of relationships (Brown, 2007; CDC, 2009). Adolescent dating violence (ADV) is a significant school health problem in the United States which has received increasing attention from school
administrators, social workers, school educators, health professionals and public policy makers (Callahan, Tolman, & Saunders, 2003; O’Keefe, 2005). ADV is defined as the physical, sexual, or psychological/emotional violence within a dating relationship (CDC, 2006).

Much of the dating violence research has focused on adult couples or college samples. However, in the past two decades much attention has been paid to dating violence among high school students (Foshee, 1996; James, West, Deters, & Armijo, 2000; Kreiter et al., 1999). Almost 3 in 4 (72%) eighth and ninth graders reportedly “date” by the time they are in high school (Foshee, 1996). A national assessment of high school students found that as many as 30% of teens have experienced dating violence in the previous year (Silverman, Raj, Mucci, Hathaway, 2001). Another study of national prevalence data collected during the same year suggests that one in every 11 adolescents report being a victim of dating violence and the problem is more likely to be reported among minority students (13.9% African Americans vs. 9.3% Hispanics and 7% in whites) (Halpern, Oslak, Young, Martin & Kupper, 2001). While exploring the gender of victims and perpetrators, fewer discrepancies have been reported in relation to perpetratoring aggression against a dating partner. It has been found that girls are at least as likely as boys to perpetrate violence against their partners even though the consequences of victimization are more severe for girls (Roberts, Auinger, & Klein, 2005). There are several reasons (varied definitions of ADV, measurement methodologies, sampling etc) which lead to the wide variations in the estimates of ADV. All these concerns have been discussed in detail in the following chapters.
Victims of ADV are at an increased risk for a variety of health related sequelae. These problems have a wide spectrum ranging from minor physical ailments to severe mental health problems including homicide and suicide. Victims of ADV are not only at increased risk for injury, they are also more likely to engage in binge drinking, suicide attempts, physical fights, and current sexual activity (CDC, 2006). ADV also involves sexual assault and may be associated with unsafe sexual behaviors that can lead to sexually-transmitted diseases like HIV infections and unintended teen pregnancies (Silverman et al., 2001).

Dating violence can be prevented. There are a variety of influences on a child’s behavior during adolescence. The family environment, parents, siblings, peers, school personnel and family physicians play an important role in the life of a child during adolescence. Adolescence has been distinguished as a "window of opportunity" (Wolfe & Wekerle 1997). It is a period in the life of an individual to prepare for future relationships by assimilating healthy interpersonal skills such as negotiation, compromise, and conflict resolution (Wolfe & Wekerle 1997). From a practical standpoint, little can be done to control a variety of influences (e.g. socio-economic status of parents, race and ethnicity, etc.) on an adolescent’s behavior. However, the time spent by adolescents in schools provides a unique opportunity to curb adolescent dating violence.

Research conducted to assess ADV incidence and prevention of ADV suffers from several methodological issues creating a void in the understanding of ADV. First, the majority of the research studies are from local or community level investigations of the epidemiology of adolescent dating violence. Second, most research focuses on prevention programs conducted at the level of a few schools. Third, the majority of the researchers
explored the problem from an adolescent’s point of view ignoring the assessment of parents and school personnel’s perceptions and practices. As discussed earlier, adolescence is a “window of opportunity” wherein adults, including parents and school personnel, should educate adolescents about the importance of choosing and developing healthy relationships. Some schools in the United States may be involved in the prevention of adolescent dating violence. However a predictive and definitive statement cannot be made about school personnel’s practices and perceptions in relation to preventing dating violence due to a dearth of national level assessments of school practices and policies.

1.2. Statement of the Problem

In the past several decades dating violence has emerged as a significant social and public health problem. Particularly, teen dating violence is a significant problem not only because of the increasing prevalence and the physical and mental health consequences (Campbell, & Lewandowski, 1997; Coker, Smith, Bethea, King & McKeown, 2000; Callahan, Tolman, & Saunders, 2003), but also because it occurs at a life stage when romantic relationships begin to develop and the patterns of interpersonal interactions are learned and carried over into adulthood (Werkerle & Wolfe, 1999). Teen dating violence can take several forms that range from verbal abuse to murder and resembles the continuum of adult domestic violence (Sousa, 1999). There is evidence in research that many of the dating violence related behaviors are a result of family environments which are known to be a prominent contextual variable that influences the likelihood of an adolescent’s involvement in an abusive relationship (O’Keefe, 1997). School personnel
can hardly impact the family environment of an adolescent, but school personnel can play an important role in promoting the health and safety of adolescents via school based initiatives. The problem of dating violence can be addressed through comprehensive education of adolescents, parents and school personnel in order to change their attitudes and perceptions towards dating violence. Specifically, the problem can be reduced by assessing the problem of dating violence in schools, increasing the outreach and surveillance efforts to identify victims of ADV, creating ADV prevention programs, and enhancing the skills of school personnel for dealing with student dating violence related issues (California Women’s Law Center, 2007).

Substantial amounts of socialization among adolescents occur in school settings where adolescents spend almost one third of their daily time. Even though dating violence occurs mostly outside the schools, teens in a dating relationship also see each other at school, and their violent interactions can cause problems to themselves and other students (Crime and Violence Prevention Center at California Attorney General’s Office, 2008). Since, adolescent dating violence has health related consequences and the perpetrators/victims of dating violence often share the school premises, school nurses can possibly play an important role in preventing or responding to adolescent dating violence (e.g. developing skills for recognizing adolescents who are abused by a dating partner, helping schools develop a response protocol to an ADV incident, deciding treatment or referral modalities for adolescents who are abused by a dating partner, encouraging students to report an incident of ADV, etc.). However, there has been no assessment of the current practices and perceptions of school nurses in relation to adolescent dating violence. This type of an assessment can help determine ways to improve the role of
school nurses in prevention and outreach efforts for adolescent dating violence. Furthermore, this assessment may eventually help in formulating and implementing school nurses practice guidelines in the United States to respond to ADV incidents and to prevent the associated health related consequences in adolescents who are victimized.

The problem addressed in this study is whether school nurses perceive adolescent dating violence to be a serious problem and if so, what activities are they engaging in to help prevent ADV incidents, what are their beliefs about the role of various school personnel in assisting victims of adolescent dating violence and what is the nurse’s reported level of knowledge about ADV.

1.3. Statement of the Purpose

The purpose of this proposed study is to examine high school nurse’s perceptions of adolescent dating violence, their school’s involvement in dating violence prevention practices, their perceptions of the role various school personnel should play in assisting student victims of dating violence, and their perceived barriers to assisting victims of dating violence, their knowledge about ADV and student victims of dating violence.

1.4. Research Questions

The following research questions will be addressed in this study:

- What is the school nurse’s perceived extent of ADV in their school?
- What ADV prevention activities are currently being used in nurse’s schools?
- What is the number of ADV victims who received assistance from a school nurse in the past 2 years?
• Based on Stages of Change theory what are the current practices of nurse’s school in relation to having a protocol for dealing with an ADV incident?

• What are school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV?

• What are school nurses’ perceived barriers to assisting student victims of ADV in their school?

• What are school nurse’s perceived roles in relation to preventing ADV?

• What is the level of knowledge of school nurses about ADV?

• What are the variables that predict whether a school nurse has assisted a victim of ADV in the past 2 years?

1.5. Hypotheses

Hypothesis 1.0- What is the school nurse’s perceived extent of ADV in their school?

1.1. The perceived extent of ADV in their school does not differ significantly based on the race/ethnicity of the school nurse.

1.2. The perceived extent of ADV in their school does not differ significantly based on the age of the school nurse.

1.3. The perceived extent of ADV in their school does not differ significantly based on the duration of employment as a school nurse.

1.4. The perceived extent of ADV in their school does not differ significantly based on the certification status of the school nurse.

1.5. The perceived extent of ADV in their school does not differ significantly based on the employment status of the school nurse (full time vs. part time).
1.6. The perceived extent of ADV in their school does not differ significantly based on the location of the school of the school nurse (Urban vs. Rural vs. Suburban).

1.7. The perceived extent of ADV in their school does not differ significantly based on the highest level of education of the school nurse.

1.8. The perceived extent of ADV in their school does not differ significantly based on the number of schools served by the school nurse.

1.9. The perceived extent of ADV in their school does not differ significantly based on whether the school nurse received any training on dating violence.

1.10. There is no difference between the extent of ADV in US schools as compared to the responding nurse’s schools.

Hypothesis 2.0- What ADV prevention activities are currently being used in nurse’s schools?

2.1. ADV prevention activities in schools do not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.

2.2. ADV prevention activities in schools do not differ significantly based on the race/ethnicity of the responding school nurses.

2.3. ADV prevention activities in schools do not differ significantly based on the age of the school nurse.

2.4. ADV prevention activities in schools do not differ significantly based on the duration of employment as a school nurse.

2.5. ADV prevention activities in schools do not differ significantly based on the certification status of the school nurse.
2.6. ADV prevention activities in schools do not differ significantly based on the employment status of the school nurse (full time vs. part time).

2.7. ADV prevention activities in schools do not differ significantly based on the location of the school of the responding school nurse (Urban vs. Rural vs. Suburban).

2.8. ADV prevention activities in schools do not differ significantly based on the highest level of education of the school nurse.

2.9. ADV prevention activities in schools do not differ significantly based on the number of schools served by the school nurse.

2.10. ADV prevention activities in schools do not differ significantly based on whether the school nurse received any training on dating violence.

Hypothesis 3.0- What is the number of ADV victims who received assistance from a school nurse in the past 2 years?

3.1. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.

3.2. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the race/ethnicity of the responding school nurses.

3.3. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the age of the school nurse.
3.4. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the duration of employment as a school nurse.

3.5. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the certification status of the school nurse.

3.6. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the employment status of the school nurses (full time vs. part time).

3.7. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the location of the school of the responding school nurse (Urban vs. Rural vs. Suburban).

3.8. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the highest level of education of the school nurses.

3.9. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on whether the school nurse received any training on ADV.

Hypothesis 4.0- Based on Stages of Change theory what are the current practices of nurse’s school in relation to having a protocol for dealing with an ADV incident?
4.1. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the nurse’s perceived extent of 
ADV problem in their schools.

4.2. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the race/ethnicity of the school 
nurse.

4.3. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the age of the school nurse.

4.4. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the duration of employment as 
a school nurse.

4.5. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the certification status of the 
school nurse.

4.6. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the employment status of the 
school nurse (full time vs. part time).

4.7. The current practices of the schools in relation to having a protocol for dealing with 
an ADV incident does not differ significantly based on the location of the school of 
the school nurse (Urban vs. Rural vs. Suburban).

4.8. The current practices of schools in relation to having a protocol for dealing with an 
ADV incident does not differ significantly based on the highest level of education 
of the school nurse.
4.9. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on whether the school nurse received any training on ADV.

Hypothesis 5.0- What are school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV?

5.1. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the perceived extent of ADV problems in their schools.

5.2. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the race/ethnicity of the school nurse.

5.3. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the age of the school nurse.

5.4. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the duration of employment as a school nurse.

5.5. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the certification status of the school nurse.
5.6. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the employment status of the school nurse (full time vs. part time).

5.7. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the location of the school of the school nurse.

5.8. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the highest level of education of the school nurse.

5.9. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on whether the school nurse received any training on ADV.

Hypothesis 6.0- What are school nurses’ perceived barriers to assisting student victims of ADV in their school?

6.1. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the perceived extent of ADV problems in their schools.

6.2. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the race/ethnicity of the school nurse.

6.3. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the age of the school nurse.
6.4. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the duration of employment as a school nurse.

6.5. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the certification status of the school nurse.

6.6. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the employment status of the school nurse (full time vs. part time).

6.7. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the location of the school of the school nurse.

6.8. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the highest level of education of the school nurse.

6.9. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on whether the school nurse received any training on ADV.

Hypothesis 7.0- What are school nurse’s perceived roles in relation to preventing ADV?

7.1. The majority of school nurses would agree that “Students who are victimized in a dating relationship need to be encouraged to report the abuse to the school nurse”.

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7.2. The majority of school nurses would agree that, “It is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships”.

7.3. The majority of school nurses would agree that, “It is the role of school nurse to work closely with school administrators to help formulate appropriate dating violence policies for students.”

7.4. The majority of the school nurses would agree that, “It is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.”

7.5. The majority of school nurses would agree that, “School nurse should be educated to assist students who are abused in a dating relationship”.

7.6. The majority of school nurses would agree that, “School nurse should assist the victims of dating violence by referring them to legal authorities”.

7.7. The majority of school nurses would agree that, “School nurses should be involved in developing the protocols that focus on how to deal with dating violence situations”.

7.8. The majority of school nurses would agree that, “It is the role of school nurses to work closely with other school personnel to improve their skills in dealing with students who are victims of dating violence”.

Hypothesis 8.0- What is the level of knowledge of school nurses about ADV?

8.1. School nurse’s level of knowledge about ADV does not differ significantly based on the race/ethnicity of the school nurse.
8.2. School nurse’s level of knowledge about ADV does not differ significantly based on the age of the school nurse.

8.3. School nurse’s level of knowledge about ADV does not differ significantly based on the duration of employment as a school nurse.

8.4. School nurse’s level of knowledge about ADV does not differ significantly based on the certification status of the school nurse.

8.5. School nurse’s level of knowledge about ADV does not differ significantly based on the employment status of the school nurse (full time vs. part time).

8.6. School nurse’s level of knowledge about ADV does not differ significantly based on the location of the school of the school nurse.

8.7. School nurse’s level of knowledge about ADV does not differ significantly based on the highest level of education of the school nurse.

8.8. School nurse’s level of knowledge about ADV does not differ significantly based on the number of schools served by the school nurse.

8.9. School nurse’s level of knowledge about ADV does not differ significantly based on whether the school nurse received any training on dating violence.

1.6. Variables

This study will investigate one level of practice of school nurses (high school nurses). The participants will receive a questionnaire which will have the following list of dependent and independent variables.
The list of independent variables is as follows:

- Gender of the school nurse. (Female/ Male)
- Race of the school nurse. (African American/ Asian/ Hispanic/ White/ Other)
- Age of the school nurse. (20-29 years/ 30-39 years/ 40-49 years/ 50-59 years/ 60+ years).
- Years worked as a full time school nurse.
- Years worked as a part time school nurse.
- Whether the school nurse is certified (Yes/ No)
- Type of certification held by the school nurse (State/ National/ Both)
- Employment status of the school nurse (full time/part time).
- Location of the school (Urban/ Suburban/ Rural)
- Number of schools served.
- Size of total school population served.
- School nurse’s highest level of education.
- Racial/ ethnic composition of nurse’s school student population (White/ Non-White)
- Whether the school nurse received any training on dating violence. (Yes/ No)

The list of dependent variables is as follows:

- Perceived extent of problem. (1-5 Scale from “no problem” to “major problem”)
- Reported practices of schools.
- Perceived barriers to assisting student victims of dating violence.
- Level of knowledge about dating violence (8 items, 4 point scale from strongly agree to strongly disagree)
- Perceived roles of school nurses.
- Stage of Change for having a protocol to address a dating violence incident.
1.7. Definition of Terms

Adolescence:
Adolescence is the period between childhood and adulthood, begins after secondary sexual characteristics appear and continues until sexual maturity is complete.

Adolescent dating violence (ADV):
It is defined as the physical, sexual or emotional / psychological violence in an adolescent’s dating relationship (CDC, 2006).

Health Belief Model:
The Health Belief Model (HBM) has been applied extensively to studies of health behavior (Janz, Champion, & Strecher, 2002). The HBM proposes five fundamental constructs. The third and fourth constructs refer to the perceived positive outcomes/ benefits and costs/ barriers/ difficulties/impediments to taking the desired action. These constructs are termed perceived benefits and perceived barriers.

High school students:
Students who are in grades 9 through grade 12.

Perceived barriers:
Reasons cited for not assisting student victims of adolescent dating violence.

Physical dating violence:
“Physical” dating violence includes hitting, slapping, punching, shoving, pinching, kicking, hair pulling, hitting, biting, throwing things, choking, using a weapon and pushing.
Psychological/ Emotional dating violence:

“Psychological /Emotional” includes excessive jealousy, trying to control the partner’s activities, calling or paging frequently to know the whereabouts of a partner, telling the partner how to dress, stalking, ignoring a date’s feelings, insulting a date’s beliefs or values, acting in an intimidating way, using sexually derogatory names, calling dates names, isolating a date from others, driving recklessly to scare a date, displaying inappropriate anger, damaging personal property, scaring a date, keeping a date from leaving, humiliating a date in public or private, telling lies and threatening to hurt them (Leon, 2009; New Choices Inc., 2010).

Risk factor:

A variable associated with an increased risk of a disease or health related problem (in this case ADV).

School nurses:

Nurses who serve the student’s health needs in the school. For this study the term ‘school nurse’ has been limited to high school nurses.

Sexual dating violence:

“Sexual” dating violence includes unwanted touching or kissing, forcing the partner to have sex or engage in any unwanted sexual activity, not allowing the partner to use birth control.

Stages of Change:

The Transtheoretical Model (Prochaska, 1979; Prochaska & DiClemente, 1983; Prochaska, Redding, & Evers, 2002) is an integrative model of behavior change.
The model describes how people modify a problem behavior or acquire a positive behavior. The Stages of Change theory is comprised of *precontemplation* (the stage at which a person does not intend to change his/her behavior within the next six months. This stage implies a lack of awareness or avoidance of change), *contemplation* (the stage at which a person is seriously thinking about changing his/her behavior and intends to do so within the next six months. The contemplation stage is characterized by ambivalence and procrastination), *preparation* (the stage at which a person intends to take action within the near future. The individual typically has a plan in place at this stage, and s/he might begin to take some behavioral steps toward action), *action* (the stage at which a person has modified his/her behavior for a short period of time. The action stage involves overt behavioral changes and requires a commitment of time and energy), *maintenance* (the stage at which an individual has modified his/her behavior for a longer period of time.

**Victim:**

The student who is exposed to violence in a dating relationship.

**Verbal dating violence:**

“*Verbal*” includes name calling, putdowns, yelling or shouting, threatening the partner or one of the partner’s family members, cursing and using sexually derogatory names.

### 1.8. Delimitations of the Study

The delimitations of the study include the following:
1. The sample of school nurses was delimited to high school nurses.

2. The sample of school nurses used for this study was delimited to members of the National Association of School Nurses (NASN) who listed their home address as the primary address.

3. The sample was delimited to school nurses in the United States.

4. The sample was delimited to nurses who could read English.

1.9. Limitations of the Study

1. The response rate for the study was not 100%. Thus, there is a possibility that non-respondents would have responded differently. If so, this might be a threat to the external validity of the results.

2. The study was cross sectional. This would limit the ability to establish cause and affect relationships between parameters estimated by the current study.

3. The survey instrument was primarily closed-format and did not allow the participants to provide additional information. This could limit the insights which could be gained through a different research design. To the extent that important items were missing from the questionnaire this could be a threat to the internal validity of the results.

4. A variety of respondent errors might have occurred. Faulty recollections, tendencies to exaggerate activities or underplay events or perceptions, and inclinations to give answers that appear more 'socially desirable' are several reasons why a respondent might have provided faulty information. To the extent that this has occurred, it would be a threat to the internal validity of the findings from this study.
5. The survey was monothematic in nature and it might have created a mindset for respondents that may not be indicative of their true perceptions and practices regarding adolescent dating violence. To the extent that this was true, it would represent a possible threat to the internal validity of the results.

6. The questions selected for the cross sectional study were based on a comprehensive review of literature and numerous assumptions and may not have contained all of the important perceptions and practices of school nurses in relation to adolescent dating violence. To the extent that this has occurred, it would be a threat to the internal validity of the findings from this study.

7. The sample of nurses chosen for this study was randomly selected from the NASN membership database & may not have adequate representation of school nurses of all age groups, races & geographic locations introducing a potential non-coverage error.

8. A select sample of the entire population of NASN will be surveyed leading to a sampling error. This refers to the difference between the estimate derived from a sample survey and the 'true' value that would result if a survey of the whole population was taken under the same conditions. This limitation can be minimized through reaching power analysis determined sample size & having a good return rate.
Chapter 2

Literature Review


2.1. Adolescent’s Romantic Relationships and Dating Violence

Romantic relationships in adolescence play a significant role in an individual’s development and well being during adolescence and adulthood (Furman & Collins, 2008). Adolescent romantic relationships have attracted popular interest, but until recently, there has been little scientific curiosity. In the 21st century there has been an increasing amount of interest in adolescent romantic relationships and the field of adolescent dating research. Physicians, particularly pediatricians, child and adolescent psychiatrists, nurses, psychologists, public health professionals and a variety of professionals from other scientific backgrounds have shown keen interest in adolescent dating relationships. Several books and a multitude of articles have been published in the
in order to provide insights on adolescent romantic relationships (Furman, Brown & Feiring, 1999; Gray, & Steinberg, 1999; Shulman, 2000; Florsheim, 2003; Crouter, & Booth, 2006). Earlier, adolescent romantic relationships were studied as a subsection of adolescent experiences in peer relationships during adolescence. Currently, there are two major themes of research in this area. First, greater attention has been given to the quality of these relations and the relevant positive or negative developmental outcomes for adolescents. Second, broader research investigations to include the processes attached to such relations are being conducted (Collins, Welsh, & Furman, 2009).

One of the avenues of the frequent ongoing debate in adolescent development research is the considerable amount of variation within the area of adolescent romance studies. Terms like “adolescent romantic relationship”, “adolescent dating experience”, “adolescent romantic experiences” are often times used interchangeably (Collins, Welsh, & Furman, 2009). The term “adolescent romantic relationship” has been defined in a variety of ways. Romantic relationships, like friendships, are on-going voluntary interactions that are mutually acknowledged, rather than identified by only one member of a pair. Romantic relationships, however, also have a peculiar intensity which can be marked by expressions of affection (including physical and perhaps the expectation of sexual relations). This definition does not mention gender, because adolescents may have relationships that meet all of these other criteria with partners of the same sex as well as partners of the opposite sex (Reis & Shaver, 1988; Diamond, Savin-Williams, & Dube, 2000; Collins, 2003). In recognizing the definitional problems related to dating, Sugarman and Hotaling (1991) proposed a definition that encompasses commitment, future interaction and physical intimacy. Additionally, they acknowledge that dating can
involve considerable variation on these dimensions. Although the majority of dating encounters involve heterosexual couples, some studies have also examined same sex relationships in adolescence (Furman, Brown & Feiring, 1999; Levy, 1998). Confusion about “dating” can easily be avoided if researchers make explicit their operational definition of dating for any given study of adolescent romantic relationships.

The incidence and prevalence of romantic relationships in an adolescent’s life in the United States (US) have been reported to increase, to the extent that US adolescents commonly report more frequent interactions with romantic partners than with parents, siblings, or friends (Laursen & Williams, 1997). Furthermore, several investigations have reported high rates of the occurrence of romantic experiences in an adolescent’s life. For example, more than half of US adolescents reported being involved in a special romantic relationship within the past 18 months (Carver, Joyner, & Udry, 2003). This could be a conservative estimate as it clearly gives a timeline and refers to a special romantic relationship. If more inclusive and liberal standards were to be applied to assess the incidence of romantic relational experiences, higher proportions of adolescents tend to report such experiences. For example, according to a few specific studies, about three fourths (76%) of high school students (Ashley & Foshee, 2005; Foshee et al., 1996), 70% of eighth and ninth graders (Foshee et al., 1998) and over half of adolescents under the age of 16 years (Fiering, 1995) reported being on a date.

The probability of having a romantic experience increases with advancing age in adolescence (Smetana, Campione-Barr, & Metzger, 2006; Carver, Joyner, & Udry, 2003). Additionally, a large proportion of adolescents in dating relationships affirmed that their relationships had persisted for more than half a year: about 20% of adolescents
14 or younger, 35% of 15-16 year olds, and almost 60% of 17 and 18 year olds had such relationships (Carver, Joyner, & Udry, 2003).

There is a growing amount of interest in the quality of adolescent dating relationships and the outcomes of such relationships. For example, adolescent dating violence has gathered increasing attention from school personnel, policy makers, public health professionals, academicians and researchers alike (ASTHO, 2010). Adolescent dating violence is a pattern of abusive behaviors that are used to gain power and control over a current or former dating partner. During the past 3 decades violence in adolescent dating relationships has increased to epidemic proportion in the United States, so much so that secondary analyses of the 2007 Youth Risk Behavior Survey, revealed that approximately 10% of adolescents nationwide reported being victims of physical violence at the hands of a romantic partner during the previous year (Halpern et al., 2001; Halpern, Young, Waller, Martin, & Kupper, 2004; CDC, 2008). The rate of psychological victimization is even higher, according to the results from secondary analyses of the National Longitudinal Study of Adolescent Health. Almost three in 10 reported being verbally or psychologically abused in the previous year by a romantic partner (Halpern et al., 2001; Roberts & Klein, 2003; Halpern et al., 2004).

There is a significant variation in the estimates of adolescent dating violence in the United States, even though it is generally believed that intimate partner violence is more prevalent in early adulthood (Halpern et al., 2001). One of the prominent reasons for this variation is a lack of a standardized definition of adolescent dating violence. Similar to the adolescent romantic/dating relationships/experiences arena, there is a lot of variation in the usage of terms adolescent/teen, dating/romantic, abuse/violence/
aggression. Additionally, the components of dating violence are defined differently by a variety of individuals and groups (physical vs. verbal vs. sexual vs. emotional vs. psychological vs. a combination of physical, sexual and emotional). Whereas some researchers also include psychological and emotional abuse (e.g., intimidation, verbal abuse, and monitoring a partner’s whereabouts) in their definition of adolescent dating violence (O’Keeffe, Brockopp, & Chew, 1986; Jezl, Molidor, Wright, 1996; Halpern et al., 2001), others use a more restrictive definition that includes only physically violent acts such as slapping, pushing, hitting, kicking, choking, etc. (Bookwala, Frieze, Smith, & Ryan, 1992; Foshee et al., 1996; Ashley & Foshee, 2005; CDC, 2008; CDC, 2006). Interestingly, some researchers report that contrary to the notion that ADV primarily involves physical abuse or sexual violence, it has been found that 20% of adolescents report being a victim of emotional abuse (Halpern et al., 2001).

Additional issues related to adolescent dating violence research arise because sexual violence is often excluded from the definition of adolescent dating violence. In addition, dating violence via the use of modern technology like cell phones and internet remains poorly understood and under explored. Predominantly, four types of adolescent dating violence have been explored. Health professionals frequently examine two of the most common forms of adolescent dating violence, “physical” which includes hitting, slapping, punching, shoving, pinching, kicking, hair pulling, hitting, biting, throwing things, choking, using a weapon and pushing; and “sexual” which is assessed as unwanted touching or kissing, forcing the partner to have sex or engage in any unwanted sexual activity, not allowing the partner to use birth control. Two other less frequently examined forms of adolescent dating violence are, “verbal” which includes name calling,
putdowns, yelling or shouting, threatening the partner or one of the partner’s family members, cursing and using sexually derogatory names and “psychological/emotional” which includes one or more of the following traits: excessive jealousy, trying to control the partner’s activities, calling or paging frequently to know the whereabouts of a partner, telling the partner how to dress, stalking, ignoring a date’s feelings, insulting a date’s beliefs or values, acting in an intimidating way, using sexually derogatory names, calling dates names, isolating a date from others, driving recklessly to scare a date, displaying inappropriate anger, damaging personal property, scaring a date, keeping a date from leaving, putting down family and friends, humiliating a date in public or private, telling lies and threatening to hurt (Missouri Families, 2009; New Choices Inc., 2010). To further examine the variation in the operational definition of teen dating violence a few verbatim examples are worth mentioning:

“Dating abuse is defined as the physical, sexual, or psychological/emotional violence within a dating relationship” (CDC, 2010).

"Any actual or threatened act that physically, sexually or psychologically abuses a member of an unmarried couple in which one or both partners is between thirteen and eighteen years old” (Jezl, Molidor, & Wright, 1996).

“Dating violence is when one person purposely causes physical or psychological harm to another person they are dating, including sexual assault, physical abuse, and psychological/emotional abuse” (USDHHS office of women’s health, 2009).

“Dating violence is a general term used to capture three forms of violent behavior that may occur in dating relationships: emotional/psychological, physical, and sexual aggression. Emotional/psychological abuse refers to aggressive acts, such as verbal
intimidation or threatened or completed acts of violence that may cause emotional trauma” (Saltzman, Fanslow, McMahon, & Shelley, 2002).

“A basic definition of Teen Dating Violence or Abuse is a pattern of actual or threatened acts of physical, sexual, and/or emotional abuse, perpetrated by an adolescent against a current or former dating partner. Abuse may include insults, coercion, social sabotage, sexual harassment, threats and/or acts of physical or sexual abuse. The abusive teen uses this pattern of violent and coercive behavior, in a heterosexual or same gender dating relationship, in order to gain power and maintain control over the dating partner” (Ball, & Rosenbluth, 2010).

“Dating violence is a pattern of assaultive and controlling behaviors that one person uses against another in order to gain or maintain power and control in the relationship. The abuser intentionally behaves in ways that cause fear, degradation and humiliation to control the other person. Forms of abuse can be physical, sexual, emotional and psychological” (Michigan Domestic Violence Prevention and Treatment Board, 2010).

“Dating violence (or relationship abuse) is a pattern of over-controlling behavior that someone uses against a girlfriend or boyfriend. Dating violence can take many forms, including mental/emotional abuse, physical abuse, and sexual abuse. So, you may experience dating violence even if you are not being physically abused. It can occur in both casual dating situations and serious, long-tem relationships” (WomensLaw, 2010).

As seen in the aforementioned definitions from a variety of sources including research based articles to government agencies, there is a considerable flexibility in the definition of adolescent dating violence. Emery (1989) pointed out that terms like ‘violence’ and ‘abuse’ are conceptually unclear and that defining an act as “abusive” or “violent,” is not an objective decision but a social judgment, whereas Archer (1994) proposes a clear distinction between violence and aggression, in which aggression
comprises the act but violence incorporates the consequences of the aggressive act, such as injury. If so, most studies related to adolescent dating violence would be an estimate of ‘aggression’ in adolescents’ romantic relationships and not an estimate of ‘violence’. This poses dual challenges in relation to estimating the prevalence and impact of adolescent dating violence. First, barring a few exceptions (Burke et al., 1988; Stets, 1991; Bookwala et al., 1992; Hausman, Spivak, Prothrow-Stith, & Roeber, 1992), researchers seldom provide a clear definition of adolescent dating violence for the purpose of their research. The other major challenge arises from the lack of a standard definition and lack of clarity in usage of the terms violence and aggression, resulting in nationwide estimates of adolescent dating violence that vary substantially. As a result, often times these estimates are not comprehensive assessments of the epidemiology of adolescent dating violence. For the purpose of this review and the study, “Adolescent Dating Violence” will be used as a term representative of all the aforementioned variants of violence in the romantic relationships of an adolescent. It is defined as the physical, sexual or emotional/psychological violence in an adolescent’s dating relationship (CDC, 2006).

2.2. Epidemiology of Adolescent Dating Violence

Far more is known about the problem of intimate partner violence in terms of prevalence, gender distribution, context, and consequences among college students and adults compared to adolescents. Very few studies have focused specifically on teens, leaving many questions unanswered and need for further investigation. Historically, the National Surveys of Families and Households (Sorenson, Upchurch, & Shen, 1996; Umberson, Anderson, Glick, & Shapiro, 1998), National Family Violence Surveys
(Straus, & Gelles, 1986), National Youth Survey (Morse, 1995) and other national prevalence estimates (Schafer, Caetano, & Clark, 2002) have excluded the adolescent dating population from their samples entirely or have not asked adolescents in nonresidential relationships about adolescent dating violence. Currently, the most widely used source for examining the estimates of adolescent dating violence in the United States are the Youth Risk Behavioral Surveillance System (YRBSS) (CDC, 2009) and the National Longitudinal Study of Adolescent Health (NLSA) (NIH, 2007).

Convenience samples of adolescents and young adults in dating relationships have yielded conflicting information regarding rates of adolescent dating violence perpetration and victimization. For example, one particular study found that almost half (44.3%) of female and less than a quarter (15.6%) of male high school students reported engaging in at least one physically aggressive behavior toward a dating partner during a disagreement (Schwartz, O'Leary, & Kendziora, 1997). In contrast, another study of high school students found similar victimization rates for physical aggression by dating partners among females (45.5%) and males (43.2%) (O’Keefe, & Treister, 1998). The proportion of high school adolescents who reported ever experiencing physical dating violence victimization ranges from 10% to 38% (Malik, Sorenson, & Aneshensel, 1997; Wingood et al., 2001; Silverman et al., 2001; Grunbaum et al., 2002; Grunbaum et al., 2004). Interestingly, these estimates were found to be lower than for those adolescents who reported actively dating someone. Among those currently dating, estimates of ever experiencing physical violence victimization are as high as 59% whereas, psychological violence victimization rates are as high as 96% (Jezl, Molidor, & Wright, 1996). However, the most widely used statistics originate from the national YRBSS. According
to the Centers for Disease Control and Prevention (CDC), 1 in 11 adolescents reports being a victim of physical dating abuse. Additionally, the rate of abuse is higher among Black students (13.9%) than among Hispanic (9.3%) or White (7.0%) students. These CDC prevalence estimates are the ones which are most frequently used by policy makers, the media, researchers and academicians (CDC, 2010). To examine the conflicting nature of the estimates of ADV, a table has been included in this review (Table 2-1).

As seen in the table, one can infer that the prevalence estimates have a broad range (4% to 40%). In general, sexually active female students and younger age groups of teenagers report higher rates of victimization. Additionally, the surveillance reports published by the CDC in 2004, 2006, and 2008, utilizing the national YRBS estimated that 8-10% teenagers were victimized in a dating relationship. Therefore, it would be prudent to consider at least an 8-10% victimization rate for teenagers in US schools. Others have estimated higher rates of victimization and the higher rates are often subject to the type of sample, geographical location, sexual activity, gender, SES of the students who participated in the study and types of methods utilized for estimating prevalence.
### Table 2.1: Estimates of Adolescent Dating Violence Victimization in the United States

<table>
<thead>
<tr>
<th>Year and Author</th>
<th>Type</th>
<th>Gender</th>
<th>Prevalence</th>
<th>Sample Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bergman, 1992</td>
<td>S</td>
<td>M</td>
<td>4.4%</td>
<td>Three Midwestern schools (9th-12th graders) 53% females.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>15.7%</td>
<td></td>
</tr>
<tr>
<td>Foshee, 1996</td>
<td>P, S, or E</td>
<td>F</td>
<td>36.5%</td>
<td>14 Schools in a district of N. Carolina (8th-9th graders), 50% female, 76% white.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>39.4%</td>
<td></td>
</tr>
<tr>
<td>Wingood et al., 2001</td>
<td>P</td>
<td>F</td>
<td>18.4%</td>
<td>Clinic based study; Black females, sexually active, 14-18 yrs of age</td>
</tr>
<tr>
<td>Silverman et al., 2001</td>
<td>P, S</td>
<td>F</td>
<td>20%</td>
<td>Massachusetts YRBS 1997, 1999 Females (9th-12th graders); 73% whites.</td>
</tr>
<tr>
<td>Grunbaum et al., 2002</td>
<td>P</td>
<td>M/F</td>
<td>9.5%</td>
<td>National YRBS 2001 (9th-12th graders) Demographics NA</td>
</tr>
<tr>
<td>Howard et al., 2003</td>
<td>P</td>
<td>F</td>
<td>9.2%</td>
<td>National YRBS 1999 (9-12th grade females) Demographics NA</td>
</tr>
<tr>
<td>Howard et al., 2003</td>
<td>P</td>
<td>M</td>
<td>9.1%</td>
<td>National YRBS 1999 (9-12th grade males) Demographics NA</td>
</tr>
<tr>
<td>Grunbaum et al., 2004</td>
<td>P</td>
<td>M/F</td>
<td>8.9%</td>
<td>National YRBS 2003 (9th-12th grades) Demographics NA</td>
</tr>
<tr>
<td>Silverman et al., 2004</td>
<td>P</td>
<td>SAF</td>
<td>17.7%</td>
<td>National YRBS 2001; Females (9th-12th graders); 68% whites, 57% Suburban, 30% Urban, 13% Rural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SIF</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td>Decker, et al., 2005</td>
<td>P, S</td>
<td>SAF</td>
<td>31.5%</td>
<td>Massachusetts YRBS 1999, 2001 (9th-12th graders); 75% whites.</td>
</tr>
<tr>
<td>Ramishetty, et al., 2006</td>
<td>P</td>
<td>F</td>
<td>8%</td>
<td>Hawaii YRBS 1999 (9th-12th graders), 53% females; 53% API, 17% Native Hawaiian, 14% Whites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>7.6%</td>
<td></td>
</tr>
<tr>
<td>Eaton et al., 2006</td>
<td>P</td>
<td>M</td>
<td>8.6%</td>
<td>National YRBS 2003 (9th-12th grades) 48.7% female; 61.5% white, 13.9% black.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>8.8%</td>
<td></td>
</tr>
<tr>
<td>O’Leary et al., 2008</td>
<td>P</td>
<td>M</td>
<td>31%</td>
<td>Seven high schools in NY; Actively dating 11th-12th graders; 55% Whites.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Eaton et al., 2008</td>
<td>P</td>
<td>M/F</td>
<td>9.9%</td>
<td>National YRBS 2007 (9th-12th grades) Demographics NA</td>
</tr>
<tr>
<td>O’Leary et al., 2008</td>
<td>P</td>
<td>Psy</td>
<td>85%</td>
<td>Seven high schools in NY; Actively dating 11th-12th graders; 55% Whites.</td>
</tr>
<tr>
<td>Swahn et al., 2008</td>
<td>P</td>
<td>Psy</td>
<td>32.6%</td>
<td>Youth Violence Survey 2004. 7th, 9th, 11th and 12th graders who were actively dating. 52% female; 44% Hispanic, 27% blacks.</td>
</tr>
</tbody>
</table>

**Type of ADV:** (P=Physical, S= Sexual, E= Emotional, Psy= Psychological).

**Gender:** (M= Male, F= Female, SAF=sexually active females, SIF=sexually inactive females).
Interestingly, ADV is not a phenomenon restricted to heterosexual couples. In a national sample of 117 adolescents, who were selected from the National Longitudinal Study of Adolescent Health because they reported exclusively same-sex intimate relationships, 14.6% of males and 26% of females reported psychological violence, and 24% of males and 28% of females reported physical violence (Halpern et al. 2004). Another study that included 184 self-identified gay, lesbian, bisexual, transgender (GLBT) youth measured five types of violence: controlling behaviors, threats to physical safety, emotional abuse, physical abuse, and sexual abuse. Of the males, 43.6% had experienced at least one type of abuse from a same-sex partner, and 39.8% of the females reported experiencing at least one type of abuse from a same-sex partner. Controlling behaviors were the most common type of abuse, followed by emotional abuse (Freedner, Reed, Yang, & Austin, 2002). Those in same-sex relationships typically experience the same types of violence as those in opposite-sex relationships, but same-sex partners may have the additional threat and fear of being outed by their partner (Freedner et al. 2002).

There are several concerns and issues regarding the current estimates of adolescent dating violence in the United States. The major issue as discussed earlier stems from the fact that reporting on the percent of adolescents experiencing abusive dating relations is often hampered by the definition disagreements on what actually comprises adolescent dating violence. For example, studies in Table 2-1 have measured different aspects of adolescent dating violence, physical, sexual or emotional. Therefore, the perception of the actual dating violence burden on society differs based on the source of the information. Predominantly, adolescent dating violence is confounded with
physical dating violence only, apart from a handful of studies in the past which have also focused on sexual or emotional forms of adolescent dating violence (Molidor, 1995; Foshee et al., 2004). Assessing physical violence has the advantage of simplicity and manageability but the resulting estimates can be a short sighted view of dating violence in adolescents. Additionally, often times the various forms of adolescent dating violence are interrelated and one form may exist with another or lead to another form of adolescent dating violence (Jackson, 1999).

Additional concerns regarding the estimates of adolescent dating violence arise from the issue of measurement. How do we measure adolescent dating violence? The YRBSS uses a set of questions mostly related to physical and sexual violence whereas; independent researchers use a variety of scales. Additionally, the timeline used for assessing a dating violence incident in an adolescent’s life differs across studies. For example, questions for adolescents can start with words like ‘in the past year’ or ‘has anyone ever’; both would result in different estimates of prevalence. Additionally, the total numbers of incidents in all the dating relations are seldom explored, mostly the total number or occurrence of any one incident are assessed by researchers (Henton, et al., 1983). Measures of adolescent dating violence are confounded further from an inclination to mingle perpetration and victimization data (Sugarman & Hotaling, 1991). Further limiting the generalizability of the estimates are the samples selected to study adolescent dating violence prevalence. The bias created due to selection of students based on race, age, gender, location, grade and class in school, sexual activity status, and other attributes are reflected in the estimates of adolescent dating violence and varies across investigators (Table 2-1).
2.3. **Risk Factors and Predictors of Dating Violence**

Risk factors for dating violence may be defined as “attributes or characteristics that are associated with an increased probability of [its] reception and/or expression” (Hotaling & Sugarman, 1990). These risk factors have been examined from a variety of perspectives and are often categorized based on the victim’s and perpetrator’s demographic characteristics, prior experiences/exposure to violence, attitudes towards violence, peer influences, personality or intrapersonal factors, other problem behaviors, and relationship factors.

The earliest model of dating violence causation was proposed by Riggs and O’Leary (1989). The model described two main categories of variables responsible for the occurrence of intimate partner violence in adolescent dating relationships—contextual and situational variables. Contextual variables are more distal in predicting which group of adolescents will perpetrate violence against a dating partner. Examples of contextual variables include the family environment, personality of the individual, witnessing parental violence, prior use of aggression against a partner and arousability. Whereas, situational variables are more direct predictors of violence in an adolescent’s dating relationship. Examples of situational variables include stress, alcohol use, aggression by a partner, relational conflicts, and expectations of positive outcomes from perpetrating violence (O’Keefe, 1997). The situational and contextual variables frequently have a tendency to coexist. For example, residence in rural communities, exposure to violence in the family of origin, parental use of violent discipline, expulsion and/or suspension from school, multiple dating partners, knowing others involved in dating violence, alcohol use, jealousy, access to weapons, and prior injury from violence are multiple causal factors.
which are found to coexist in perpetrators of adolescent dating violence (O’Keefe, Brockopp, & Chew, 1986; Reuterman & Burcky, 1989; Avery-Leaf, Cascardi, O’Leary, & Cano, 1997; Malik, et al. 1997; Foshee et al., 2004).

Family interactions and relationships are probably the most important predictors of violence in adolescent dating relationships as they provide the foundation of psychological and social development for children. Although it is evident that not all adolescents who are exposed to family violence engage in or become victims of violence, an increasing amount of research is linking these factors. According to one study, in the United States more than three million children and adolescents ages 3 to 17 are exposed to parental violence at least once a year (Wolfe, 1994). Another investigation reports that every year, 3 to 10 million children witness domestic violence (Carter, Weithorn, & Behrman, 1999). Exposure to multiple forms of family violence (e.g., child maltreatment, spousal/partner violence, a climate of physical fighting and hostility) has a particularly strong effect on future victimization and/or perpetration of violence by youths (Dahlberg, 1998; Thornberry, 1994). In an original investigation published by O’Keefe et al. (1986) the intergenerational component of violence among a large group of high school students was discussed and more than half of the students who had experienced dating violence reported witnessing their parents being abusive to each other. A few studies indicate that teens, particularly males, who witness interparental violence are at higher risk for inflicting dating violence (Foo & Margolin, 1995; O’Keefe, 1998; Wekerle & Wolfe, 1999; Lewis, & Fremouw, 2001; Kinsfogel & Grych, 2004).

The second group of risk factors most extensively examined is related to the personal traits of adolescents and their behavior. For example, risk factors for sexual
violence in dating relationships include younger age at first date, early sexual activity, earlier age of menarche, and/or prior sexual victimization and low self-esteem (Burke, Stets, & Pirog-Good, 1988; Ellickson & McGuigan, 2000; Silverman et al., 2001).

Furthermore, dating violence has been associated with a number of risky attitudes, beliefs, and practices among adolescents which range from alcohol use to having multiple dating partners (Wingood et al., 2001). This in part is due to the fact that adolescents who engage in one problem behavior are likely to engage in other problem behaviors. Both male and female adolescents experiencing dating violence report experiencing or engaging in high risk sexual behaviors (e.g., having multiple sex partners and nonuse of condoms), pregnancy, and unhealthy weight control (Silverman et al., 2001). Use of alcohol and drugs has been consistently found to be strongly associated with inflicting and being the recipient of dating violence for both genders (Silverman et al., 2001). Also, the association between substance use and females experiencing sexual aggression from dating partners has been examined. It is often believed by a male perpetrator that females who consume substances on a date are partly responsible for their assault resulting in an increased risk of sexual victimization by the dating partner (Marx, Van Wie, & Gross, 1996). Chase and colleagues (1998) found that 68% and 33% of females and males respectively, who engaged in other high risk behaviors like substance abuse, reported being violent against their current or recent dating partner. This prevalence rate is considerably higher than the 15% to 35% prevalence found among adolescents without any high risk behaviors (i.e., those attending regular high schools and not exhibiting major behavior problems) (O’Leary & Cascardi, 1998).
Apart from engaging in risky behaviors, adolescents who perpetrate or are victimized in a dating relationship have been found to have distinctive personality traits and interpersonal characteristics. Low self-esteem has been found to discriminate between males initiating dating violence and their non-violent counterparts and has also been found to be associated with being a victim of dating violence for females (O’Keefe & Treister, 1998; O’Keefe, 1997). Studies with national samples of high school students also report that psychosocial issues like sadness, feelings of hopelessness and suicidality are associated with victimization for both male and female adolescents (Kreiter et al., 1999; Howard & Wang, 2003a; Howard & Wang, 2003b). The quality of an adolescent dating relationship is a major predictor of victimization and perpetration. Greater relationship conflict has been positively associated with inflicting dating violence for both males and females (Bergman, 1992; O’Keefe, 1997). For females, greater relationship conflict and less relationship satisfaction are significantly associated with being the recipient of dating violence (O’Keefe & Treister, 1998). In addition to a number of psychosocial issues being associated with dating violence, research shows that misperceptions about relational violence play an important role. A consistent factor associated with inflicting violence against a dating partner is the belief that it is acceptable to use violence (Henton, et al. 1983; Tontodonato & Crew, 1992; Malik et al., 1997). In a number of studies, this association has been found to be more common for males. A possible explanation for this association is that males who initiate violence against their partner are more likely to expect positive consequences of perpetrating violence as opposed to non-violent males who are more likely to expect that violence can lead to dissolution of the relationship (Riggs & Caulfield, 1997).
Additional characteristics like race/ethnicity and geographical location also have been examined in relation to adolescent dating violence (Spencer & Bryant, 2000). Higher rates of inflicting physical aggression against a dating partner have been found in urban inner city areas compared to rural areas (Bergman, 1992; Makepeace, 1987), whereas higher rates of victimization have been reported for rural teenagers as compared to urban and suburban counterparts (Spencer & Bryant, 2000). In addition, some differences have been found for race/ethnicity, with the highest rates of perpetration and victimization found among African Americans as compared to adolescents of all other racial and ethnic groups (Makepeace, 1987; Howard & Wang, 2003; CDC, 2006).

Socioeconomic status (SES) of adolescents and their families has been reported to have an association with dating violence. A few studies found higher rates of dating violence in adolescents of low SES families (Sigelman, Berry, & Wiles, 1984; Makepeace, 1987).

The quality of an adolescent’s dating relationship is also influenced by intrapersonal factors of family and peers like socioeconomic status of parents, quality of parental relationships and the quality of dating relationships of peers. High quality parenting/peer experiences are associated with healthy dating relationships in adolescents (Donnellan, Larsen-Rife, & Conger, 2005; Roisman, Booth-LaForce, Cauffman, & Spieker, 2009). A few studies indicate that adolescents who witness violent relationships between parents and peers are more likely to be a part of an abusive dating relationship with greater chances of perpetrating and being victimized in the relationship (Stith et al., 2000; Arriaga & Foshee, 2004). Therefore, apart from influencing aggressive behavior or victimization of adolescents directly (by being a part of a violent relationship), friends and family also influence adolescents in other ways, which can increase the tendency to
perpetrate violence or be victimized as discussed earlier in the predictors of adolescent dating violence. Substance use by friends can also pose additional threats, if friends encourage substance use, they may also encourage inflicting or tolerating dating violence (O’Keefe, 1997).

The mass media plays an increasingly important role in shaping behaviors and attitudes of adolescents particularly as it relates to dating relationships. Research suggests that peers might often rely on media instead of parents or family members to get sexual information (Ward, 2004). This is mostly due to the riveting characters, storylines, and situations that often times intend to define and depict interpersonal relationships in both appropriate and inappropriate ways (Wood, Senn, Desmarais, Park, & Verberg, 2002; Rivadeneyra & Ward, 2005). Direct correlations have been found between earlier viewing of sexual content, and sexual activity and intercourse within the following year (Collins et al., 2009). Increasing media consumption is associated with a perception of adolescents that dating is a gendered process with predefined roles for males and females, a distorted attitude often linked to greater sexual risk for adolescent females (Rivadeneyra, & Lebo, 2008). In a few studies television viewing in particular, has been linked to increased promiscuous behaviors in young adults and adolescent females with higher expectations of sexual activities in relationships (Aubrey, Harrison, Kramer, & Yellin, 2003). Considering this, adolescents are more vulnerable to inappropriate media projection of relationships due to the large amount of time spent consuming media information and inadequate critical thinking skills as compared to adults (Collins et al., 2009). In addition to a lack of good sources of information and inadequate critical thinking skills on dating, some adolescents who do not have personal experience with
dating and sexual relations are more vulnerable to acceptance of violence in dating relationships and practicing unsafe sexual behaviors (Roberts, Foehr, Rideout, & Brodie, 1999).

The advent of internet and mobile phone technology has increased the existing challenges for parents, school personnel, academicians and policy makers alike to guard the romantic relationships of adolescents. Over three fourths (80%) of adolescents own at least one form of new media device or related technology (e.g., computer for internet access and cell phone) and these modalities of communication are being used increasingly for a broad variety of purposes (text, instant message, e-mail, and accessing social networking websites (Lenhart, Madden, & Hitlin, 2005). Modern day dating involves frequent interaction between adolescents via phone/internet and psychological/emotional violence through the use of technology has also been reported lately.

The vulnerability to and perpetration of violence in a dating relationship through the use of modern technology has recently been studied to some extent. One fourth (25%) of the actively dating adolescents have reported that they were called names, harassed or put down by their partner through cell phones and texting and about 1 in 8 (12%) of the adolescent girls who have sent sexually suggestive messages or images reported feeling “pressured” to do so (Teenage Research Unlimited, 2007). In relation to gender differences, less than 1 in 5 (18%) adolescent males reported that pressure from a girl is a reason boys send sexual content (images, messages etc) via cell phones whereas, more than half (51%) of the adolescent females reported that pressure from males was a reason for them sending sexual content (Teenage Research Unlimited, 2008).
Risk factors are often believed to differentiate adolescents who are involved in dating violence from those who are not. However, it is important to note that these factors may not be the causative factors and frequently these factors can be the correlates of dating violence in an adolescent’s romantic relationships. For example, an examination of factors like high risk sexual behaviors, low self esteem and depression poses the question of causation and whether these traits are risk factors, consequences, or related to dating violence through another mediator. Consequently, these risk factors and correlates may have implications for the primary prevention of dating violence, but they may also be symptoms or outcomes that have implications for treatment.

2.4. Signs, Symptoms and Health Outcomes of Dating Violence

Adolescents do not report the incidents of dating violence frequently due to a variety of reasons including guilt, fear, and misperceptions leading to acceptance of dating violence as a normal part of a relationship (Williams & Martinez, 1999). Furthermore, young people often remain in an abusive relationship for many reasons, including: fear of their partner, self-blame, loyalty or love for their partner, social or religious stigma, lack of understanding, belief that they may have caused the violence, the belief that dating violence is a private matter, and embarrassment or denial (Howard & Wang, 2005). Therefore school personnel, parents, and health care professionals need to take an active approach to detect and prevent adolescent dating violence. One effective approach to detection and prevention is to recognize the signs and symptoms of adolescent dating violence (Hamberger & Ambuel, 1998). In general, there is a need to be alert for signs, symptoms, or contextual factors that suggest an adolescent is at high
risk for dating violence. Predominantly, the signs and symptoms can be general (e.g. distress, depression, anxiety, abdominal pain, pelvic pain, sudden changes in relationships with family and friends or in functioning at school, and drug and alcohol abuse) or specific to injury and violence (contusions, abrasions, lacerations to the torso, breasts, face, and genital or anal area; fractures, burns, multiple sites of injury, and a pattern of injury over time) (Hamberger & Ambuel, 1998).

Consistent and robust associations have been identified between dating violence and poor health outcomes for adolescents of both genders. However, the cross-sectional nature of research studies makes it difficult to determine the sequence of events. Further limiting the understanding of adolescent dating violence outcomes is the fact that studies examining dating violence and adolescents have focused primarily on physical and mental health outcomes for female victims. For example, a recent study reports that adolescent dating violence leads to worse consequences for the female partners’ health, ranging from slight cuts, minor bruises to broken noses, black eyes, broken bones and other physical injuries requiring medical treatment or hospitalization (Muñoz-Rivas, Graña, O’Leary, & González, 2007). Limited research has examined health outcomes for adolescent male victims or for perpetrators of dating violence. As discussed earlier, it is difficult to establish the temporal sequence between problem behaviors and whether health issues lead to dating violence victimization or if they are mere consequences of victimization in a dating relationship. For example, a study conducted by Chiodo and colleagues (2009) reports that sexual harassment of 9th grade females was associated with elevated risk of emotional distress, self-harm, suicidal thoughts, maladaptive dieting, early dating, substance use, and feeling unsafe at school. It is difficulty to know if dating
violence is a cause or outcome of the multiple health related issues intricately associated with victimization.

Several studies have examined the physical and sexual health of adolescents in relation to dating violence. Wingood and colleagues (2001) observed that girls who reported a history of dating violence were almost 3 times as likely to have acquired a sexually transmitted disease predominantly from male partners who were polygamous as compared to the girls who did not experience dating violence victimization. Additionally, adolescent girls with a history of dating violence were half as likely to have used condoms consistently during the previous 6 months and twice as likely to have ever been pregnant as opposed to female peers who were not abused or victimized in a dating relationship (Wingood et al., 2001). Adolescent pregnancies have seldom been studied in relation to adolescent dating violence. Interestingly, one study reports that adolescent dating violence is associated with a higher likelihood of pregnancy in adolescent females and often these pregnancies result in low birth weight babies (Renker, 1999). It is proposed that low birth weight may be an outcome when abusive adolescent males pressure female adolescent partners not to gain weight. Alternatively, it is also proposed that violence may contribute to stress that has in turn been associated with smoking, low weight gain, and consequently low birth weight babies (Curry, Perrin, & Wall, 1998). At times, the consequences of adolescent dating violence can be extreme, including rape and murder. In the United States death has been reported to be the most serious consequence of dating violence. From 1976 through 2005, 5% of 12–17-year-old female homicide victims and 29% of 18–24 year-old female homicide victims were killed by an intimate partner (Teten et al., 2009).
In addition to sexual and physical health outcomes being explored by academicians, psychological problems have been examined in relation to adolescent dating violence. In a study of high school students, exposure to physical violence was associated with depression, anger, anxiety, posttraumatic stress disorder, and suicidal ideation (Singer, Anglin, Song, & Lunghofer, 1995). Extreme psychosomatic reactions coupled with academic failure have also been reported to have an association with adolescent dating violence (O’Leary & Cascarci, 1998; Sugarman & Hotaling, 1989). Similarly, Plichta (1996) reported that rates of depression and eating disorders, as well as drug, alcohol, and tobacco use, were more than twice as high in girls who reported physical or sexual dating violence than in girls who had not been abused. In another YRBSS study of the association between lifetime prevalence of dating violence and negative health outcomes in adolescent girls, Silverman and colleagues (2001) found that girls experiencing violence in a dating relationship were at least three times more likely to report being pregnant as compared to the non-abused peers. Girls who had been physically or sexually abused in a dating relationship were at least five times more likely to have had recent suicidal ideation and/or actual attempts as compared to peers who did not report being victims of dating violence (Silverman et al., 2001). Not surprisingly, a recent study of adolescents' experiences of psychological and physical relationship aggression reported that symptoms of psychological distress were correlated positively with both forms of aggression (Jouriles, Garrido, Rosenfield, & McDonald, 2009).

Variables directly or indirectly related to health status of adolescents have seldom been explored in relation to adolescent dating violence. The preponderance of research studies linking bullying to poor life satisfaction, quality of life and lower academic
achievement is high (Dake, Price, & Telljohann, 2003). However, only a few studies have been conducted to assess the association of these variables with adolescent dating violence. Neumark-Sztainer et al. (2000) and Coker et al. (2000) observed a lower level of life satisfaction along with poorer physical health in adolescents who were in an abusive dating relationship. Particularly, sexual dating violence was associated with poor health related quality of life, lower life satisfaction scores and adverse health behaviors in adolescent female victims and male perpetrators (Coker et al., 2000). Singer and colleagues (1995) report a specific association between school failure and adolescent dating violence whereas a more recent study found an association between school harassment and lower academic achievement (Luster, Small, & Lower, 2002). However, the association held true only for females and was marred by the fact that it did not specifically link adolescent dating violence with lower academic achievement. It is also important to note that the results from a few studies that have explored educational outcomes in relation to adolescent dating violence are often times confounded by intervening variables such as depression, suicidal thoughts, and substance use which might be linked independently with poorer educational outcomes (Banyard & Cross, 2008).

In general, violence or abuse suffered in childhood leads to a higher likelihood of adult revictimization and there is a tendency to perpetrate violence in adulthood among adolescents who perpetrate aggression (Siegel, 2000). However, only a few longitudinal studies have defined the possible long term outcomes and impact of adolescent dating violence. According to one particular study, sexual harassment victimization was common among boys (42.4%) and girls (44.1%) in 9th grade. Further analyses indicated
that these students were significantly more likely to be victimized by dating partners 2.5 years later as compared to those students who were not in a violent dating relationship earlier. Types of revictimization included sexual harassment, physical dating violence, and physical peer violence. Sexual harassment of 9th graders was also found to be a significant contributor to emotional distress, problem substance use, and violent delinquency perpetration 2.5 years later for both adolescent boys and girls (Chiodo et al., 2009). In relation to the long term health outcomes of adolescent dating violence, Brown and colleagues (2009) examined a sample of 98 young people ages 15-24 years referred to a youth mental health service who had endured physical violence by an intimate partner. The reported prevalence of dating violence in the 12 months prior to referral was 13%. Physical dating violence reported at referral was associated with poorer psychosocial functioning, substance dependence and comorbid psychiatric diagnoses at 6-month follow-up (Brown et al., 2009).

2.5. Adolescent Help-Seeking Behaviors

Research suggests that adolescents are more likely to confide in peers as compared to family members and adults about dating relations and dating violence mostly due to lack of knowledge on seeking formal help and potential embarrassment by the family (Tishby et al., 2001; Jackson, 2002). In one particular study it was reported that more than three fourths of adolescents seek help from peers for problems in interpersonal relationships (Fallon, & Bowles, 1999) whereas another examination of informal helpers and victims of teen dating violence reported that fewer than one in three (32 %) teens in an abusive relationship confided in their parents about their abusive
relationship (Family Violence Prevention Fund, 2009). Additionally, informal help is most often sought as compared to formal reporting of a dating violence incident (Ashley, & Foshee, 2005; Jackson, 2002). Therefore, peers often end up playing an important role in addressing the issues of an adolescent’s abusive relationships.

Reciprocally, teens are reasonably aware of peers being victimized in dating relations. A series of studies commissioned by LizClaiborne, Inc. have reported high awareness of adolescents about peers who know them being victimized in current or past dating relationships. The key findings of these studies included an estimate of the burden of adolescent dating violence. More than half (57%) of teens reported knowing someone who has been physically, sexually, or verbally abusive in a dating relationship, almost one third (33%) of teens reported having actually witnessed an event of dating violence, another one third (33%) of teens reported knowing a friend or peer who has been hit, punched, kicked, slapped, choked, or otherwise physically hurt by his or her partner, nearly one fourth (25%) of 14-17 year-olds reported knowing at least one student who was a victim of dating violence, more than 1 in 10 (11%) reported knowing multiple victims of dating violence, and 45% of girls reported knowing a friend or peer who had been pressured into either intercourse or oral sex (LizClaiborne Inc., 2000; LizClaiborne Inc., 2005). Even though teens rely more on peers to discuss abusive dating relationships, often times peer groups are not able to provide appropriate guidance. For example, according to one study, adolescents who told a peer about being severely victimized were more likely to receive an avoidance response than those adolescents who told about less severe dating violence (Weisz, Tolman, Callahan, Saunders, & Black, 2007).

As adolescents report relying more on peers to seek help regarding an abusive
dating relationship, the role of family tends to be marginal. This, in part, is due to the potential embarrassment for the victim, increase in victim self blame and possibly parental lack of awareness and inadequate engagement in educating adolescents. In a recent study, more than four in every five parents (82%) felt confident about recognizing the signs if their child was experiencing dating abuse even though a majority of these parents (58%) could not correctly identify all the warning signs of abuse (Family Violence Prevention Fund, 2009). Additionally, in the same population based study almost three fourths (74%) of adolescent males and two thirds (66%) of adolescent females reported not having a conversation about dating abuse with a parent in the past year even though three fourths of the parents reported that they had a conversation about dating abuse with their children in the past year (Family Violence Prevention Fund, 2009).

As discussed above, peers and families have important roles to play in helping adolescents seek help if they experience abuse in a dating relationship. However, the reliance on less equipped peers and parental apathy often results in victims getting inadequate support to deal with physical, sexual and emotional trauma experiences in abusive dating relations. Adolescents who are in an abusive dating relationship often face several challenges. First, reluctance to seek help can make them vulnerable physically and psychologically (Levy, 1998). Secondly, even after reporting about abusive relationships, adolescents frequently continue the relationship with the perpetrator as reporting to informal helpers most of the times results in no concrete solutions (Jackson, 2002). Finally, many of the victims and perpetrators belong to violent households, poor families, are often racial/ethnic minorities and have multiple problems which further
complicate the issue of seeking help at home for interpersonal violence during adolescence.

2.6. Role of School and School Personnel in Dating Violence

Unfortunately, schools are not exempt from the impact of teen dating violence. While teen dating violence often occurs off campus, teens in a dating relationship also see each other at school, and their violent association can cause a severe safety hazard to themselves and other students (Crime and Violence Prevention Center at California Attorney General’s Office, 2008). Adolescent dating violence prevention programs and the epidemiology of adolescent dating violence have frequently been investigated in schools. The schools can play an important role in preventing and responding to adolescent dating violence and can also be an important locus responsible for mediation of ADV. As discussed earlier, adolescent dating violence has several contextual and situational variables which comprise the etiological foundation of the problem. Situational variables have been studied extensively in the background of school circumstances (O’Keefe, 1997). Additionally, school violence impacts the long term health, wellbeing and academic success of an adolescent (Hurt, Malmud, Brodsky, & Giannetta, 2001).

School Environment

Even though the most insightful and comprehensive estimates of adolescent dating violence in the United States originate from the study of school based adolescents, the influence of the socio-cultural environment of schools on adolescent dating violence
has not been sufficiently explored. The geographical, cultural and social differences among various schools used to investigate the epidemiology of adolescent dating violence are largely responsible for the discrepancies in the reported etiology and estimates of adolescent dating violence in American schools. For example, one particular study by Cano et al. (1998) provides an explanation for inconsistencies across studies concerning the role of adolescent attitudes in causing adolescent dating violence. It is reported that within-school cultures can impact adolescent’s attitudes towards dating and violence in dating relationships. Another study (Lavoie, Hebert, & Dufort, 1995) found adolescents’ attitudes to be differentially correlated with dating violence. The authors suggest that these differences might have been due to the inter-school differences in terms of cultures and norms. In contrast, Cano et al. (1998) found more similarities between schools than differences, suggesting that the consistency of association between adolescent attitudes and dating violence incidents was found across different school cultures and subgroups. It is also mentioned in the same study that the inconsistencies might be attributed, in part, to regional differences.

Examination of the literature on ADV suggests that youth violence in schools has become a serious concern for Americans. However, the vital mediators of youth violence in schools, the school system factors (physical environment- e.g. recess times, unsupervised zones, after school interaction around school premises etc.) related to violence, violence prevention efforts in schools and research paradigms have seldom explored the physical environment of schools (Astor, Meyer, & Behre, 1999). Furthermore, for adolescent dating violence in particular, there is an impending need for quality research. For example, school personnel and parents alike would infer that most
incidents of school violence would occur in hallways, restrooms, cafeterias and overcrowded places (Astor, Meyer, & Behre, 1999), but there has been no systematic investigation about where, when and how dating violence incidents take place on the school premises. The majority of the investigations about school based youth violence are post hoc explanations of why and when the tendencies of school violence escalate; these would include crowding, lack of supervision, recess times, etc. (Olweus, 1993; Gottfredson, 1995; Pietrzak, Petersen, & Speaker, 1998). It is important to understand that the psychological perspectives of dating violence in schools are inseparable from the social and physical contexts of the school. Most interventions and studies on ADV aim to explore youth characteristics (intrapersonal), school culture (community), or security measures and disciplinary actions (policy level). However, a crucial component which has to be explored is the timing and location of incidents in and out of the school environment.

**School Personnel Roles in Dating Violence**

A systematic review of the literature failed to reveal the current practices and perceptions of school personnel like school nurses, counselors, school resource officers, health teachers, and school administrators in relation to adolescent dating violence prevention and relevant interventions. However, several groups of school personnel have often been mentioned as care providers or helpers to adolescents who report incidents of dating violence (Ashley & Foshee, 2005). In one particular study, adolescents who indicated that they had sought help for dating violence were asked to identify the sources of help from a list that included both informal and formal sources (Ashley & Foshee, 2005). In case of victims, 13% sought help from a school counselor, 13% sought help
from a law enforcement officer, 12% sought help from a teacher, 6% sought help from a school nurse and 4% sought help from a social worker. In the case of perpetrators, 31% sought help from teachers, 24% sought help from police officers, 18% sought help from school counselors, 17% sought help from social workers and 10% sought help from school nurses. Interestingly, the vast majority of victims (89%) and perpetrators (83%) sought help from school peers (Ashley & Foshee, 2005). However, none of the studies reported a systemic national examination of school personnel’s perceived roles in preventing and responding to adolescent dating violence.

School personnel have also been included as critical components of research studies conducted to estimate the burden of adolescent dating violence, prevention programs and outreach efforts. Most programs which intended to raise awareness about adolescent dating violence include predetermined roles for school personnel (Nabors, Weist, & Reynolds, 2000; Jaycox et al., 2006). Furthermore, prevention programs of both experimental and quasi-experimental designs involved school nurses, school counselors and school teachers for educating teens, conducting surveys, providing informational materials, and deciding the protocol for evaluation of adolescent dating violence prevention programs (Nabors et al., 2000; Jaycox et al., 2006).

Apart from facilitating awareness campaigns and studies to estimate the burden of adolescent dating violence, school personnel and school systems often times become critical elements for successful implementation of adolescent dating violence prevention programs. However, there are many challenges posed by the traditional school environment in estimating adolescent dating violence or conducting school based prevention programs. First, the requirements for human participants’ protection in studies
involving school populations are more stringent than in studies of the general population (Jaycox et al., 2006). These requirements restrict potential research designs and may reduce researcher interest in examining adolescent dating violence. When studies are undertaken, active parental consent is often required for youth participation, which may lead to reduced response rates and exclusion of the most vulnerable youths. Additionally, because volunteering for intervention programs requires parental consent, this has often been cited as a cause for reduced access for youths who are in need of services (Pokorny, et al., 2001, Esbensen, Melde, Taylor, & Peterson, 2008). Second, a lot of time and money has to be spent on recruitment of adolescents in schools which depends on cooperation from school personnel and school administrators (Jaycox, et al. 2006). Third, in an ideal situation, the most effective method for evaluating a school-based prevention program is a well controlled randomized trial (Flay & Collins, 2005). Unfortunately, this type of evaluation design needs a lot of time, money and resources. Additionally, experimental designs in schools require alteration of normal operating procedures in schools to meet the demands of the study design and implementing rigorous controls to minimize the effects of possible confounding variables, which is often times not feasible as it requires a very high level of cooperation and investment by schools, implementers, and the communities from which the participants are drawn (Flay & Collins, 2005; Jaycox, et al. 2006).

2.7. Prevention, Screening and Responding to ADV

This section discusses screening and prevention on interpersonal/community and organizational levels. The literature about victim cases/case studies, care provider
practices and clinician office screenings will be reviewed along with the literature about many of the prevention programs in the United States.

**Preventing Adolescent Dating Violence**

There is a considerably large lacuna to be filled by prevention program planners and school professionals regarding adolescent dating violence. There is an impending need to educate parents on healthy dating relations during adolescence and on detection and amelioration of dating abuse in an adolescent. Also, it would be prudent to educate teens on improving the advice they provide to a known peer victim of dating violence, encouraging victims and their peers to report dating violence incidents and to seek formal help for a victim (Ashley & Foshee, 2005). Parents and family also have a larger role to play in order to restrain the media content assimilated by adolescents; specifically, media content which might lead to distorted perceptions of dating relations and may pose a risk for developing unhealthy dating relations in adolescents. Similarly, technology use by adolescents has to be supervised by parents and family members.

Most of adolescent dating violence occurs beyond the school premises and parents can influence and manage adolescent’s dating relationships by education and rule setting. However, parenting a child who is romantically involved requires additional skills and poses additional liabilities on the parent’s part. Few studies have examined parenting of an adolescent who is involved romantically with peers (Kan, McHale, & Crouter, 2008; Madsen, 2008). Parents can manage their adolescent’s relations via a variety of specific roles such as *designers* (of adolescent’s environment), *mediators* (of adolescent’s relations), *supervisors* (monitoring of adolescent’s relations) and *consultants*
In one study a majority (64%) of the parents reported using rules for interpersonal relations of adolescents which varied by parent and child gender, quality of parent/child relationship and parent’s marital relationship (Madsen, 2008). Keeping in view that social support, particularly from parents and family, can help control a variety of etiological factors related to adolescent dating violence such as abnormal peer interaction, inadequate knowledge on acceptable and unacceptable behaviors in dating relations and inappropriate media content consumption, this should be an important avenue for primary prevention of ADV.

Adolescent dating violence usually does not occur as a single entity nor is it disconnected from an adolescent’s past experiences. The victims and perpetrators of adolescent dating violence exhibit several different demographic and intrapersonal traits. Adolescent dating violence prevention often remains a quandary for experts and academicians as this unique problem has roots embedded within broader social and cultural frameworks that support violence and aggression (Zurbriggen, 2009). It is therefore important to fully understand the causes beginning at an earlier age in an adolescent’s life. The social ecological approach has often been discussed to include a broad range of factors conducive for adolescent dating violence that act on the community and societal levels and therefore, the approach to prevention should similarly emphasize the importance of intervening at these levels rather than only at the level of the individual (Smith, White, & Moracco, 2009). As discussed earlier, there are several risk factors for ADV like parental violence, childhood maltreatment, mental illness, poorer socio-economic background, media influence etc. To a greater extent, prevention of adolescent dating violence is to be considered in terms of feasibility and employment of
realistic methods for prevention. Several of the antecedents like childhood maltreatment and poor socio-economic background cannot be addressed by prevention strategies. However, even with limited efficacy, educational interventions have reportedly led to an increase in awareness of adolescents regarding healthy dating relations and acceptable behaviors in a dating relationship.

**Prevention Programs**

Most prevention programs focus on primary prevention and secondary prevention. Primary prevention is attained by stopping the first perpetration of dating violence in an adolescent’s relationship. Secondary prevention is attained when victims stop being victimized or when perpetrators stop violence against intimate adolescent partners (Foshee et al., 1998). Prevention programs addressing relational violence have traditionally focused on adults. In the past two decades adolescent dating violence prevention programs have been conceptualized, implemented and evaluated by various individuals and groups. A critical examination of the literature suggests that some success has been achieved in conceptualizing a variety of programs for adolescent dating violence prevention, but the efficacy of such programs is still questionable. Furthermore, the extent to which these programs will help target millions of teenage victims and perpetrators of dating violence remains questionable (Whitaker et al., 2006).

There are a variety of concerns to be addressed regarding adolescent dating violence prevention programs. Adolescent dating violence prevention programs have primarily utilized educational interventions targeting high school students with fewer programs conducted for middle and elementary school students (Cornelius & Resseguie,
2007). Therefore, focusing the primary and secondary prevention efforts at an earlier age would be prudent as most adolescent relationships develop during the onset of adolescence. Wolfe and colleagues (2009) make the comparison to academic subjects such as literature and mathematics which are introduced at a very early age, in a developmentally appropriate way. Children then increase their knowledge and skills through continued exposure to the topic. Information about relationships and violence could be introduced in the same way, with children given the opportunity to practice the skills that they need to develop. The outcomes of prevention programs are often based on achievement of one outcome. A consideration of some well known prevention programs elucidates this further (Table 2-2). Increasing knowledge about dating violence, increasing peer education, changing attitudes that justify or are supportive of dating violence, increasing use of school based and community anti-violence programs, decreasing verbal and physical aggression within a dating relationship, increasing help seeking behavior, changing gender role stereotypes, and improving conflict management skills are some of the objectives and target outcomes of adolescent dating violence prevention programs.

Prevention programs typically include a combination of the aforementioned goals and objectives. This poses dual challenges. First, most programs are not comprehensive and second, it remains questionable if achievement of a single objective or goal can claim the program was successful. There is a need to develop comprehensive programs with well defined objectives which are realistic. A “significant outcome” as reported by program planners frequently depends on change in measures between a pre-intervention assessment and post-intervention assessment based on survey items. However, the
measures used to evaluate programs differ by individual program types. Conflict Behavior Scale (Schewe & Bennett, 2000), Victimization in Dating Relationships (Foshee, 1998) and Dating Violence Norms (Foshee, 1998) are well know instruments employed to evaluate adolescent dating violence prevention programs, but some programs utilize single items related to knowledge and attitudes (Macgowan, 1997). There are many methodological concerns such as parameters for reliability and validity of such assessments. There is a need for quality research which examines behavioral change. Most of the existing data on ADV compares pre-post intervention measures and these measures are generally related to knowledge or attitudes whereas, the main purpose of the programs should be to alleviate adolescent dating violence related behaviors.

Figure 2-1: Sample Dating Violence Prevention Programs

<table>
<thead>
<tr>
<th>Program/Sponsor/Reference</th>
<th>Content</th>
<th>Outcomes</th>
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<tbody>
<tr>
<td><strong>Skills for Violence-Free Relationships</strong></td>
<td>The curriculum had four sections: 1) definition of terms; 2) myths and facts about abuse and violence; 3) why violence takes place; and 4) prevention skills.</td>
<td>Both knowledge and attitudes scores significantly improved from pre- to post-test for the program when compared to the no-program group. However, pre-test to follow-up comparisons of both groups indicated no significant differences in scores.</td>
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<tr>
<td>Southern California Coalition on Battered Women (Krajewski et al., 1996)</td>
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<tr>
<td><strong>Expect Respect</strong></td>
<td>A 12-session curriculum included class discussions, role-plays, games and creative writing exercises on teasing and bullying behavior and to explore links between teasing, bullying and sexual harassment.</td>
<td>When compared to control students at the end of one semester and end-of-year testing, the program students significantly improved their knowledge of sexual harassment and intention to intervene in a bullying situation rather than rely on an adult to do this. Awareness of bullying at school significantly increased from pre- to end-of-year testing for the program students.</td>
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<tr>
<td>Centers for Disease Control and Prevention (CDC) (Sanchez et al., 2001)</td>
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</tr>
<tr>
<td>Program</td>
<td>Description</td>
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<tr>
<td><strong>STAR:</strong> Southside Teens About Respect Chicago Department of Public Health and the CDC. (Schewe &amp; Anger, 2000)</td>
<td>Major components of the project include classroom-based education for students, teacher workshops, parent workshops, peer leadership/activism training, a community-wide public awareness campaign, and community-based workshops for out-of-school youth. The school-based interventions had clear effects on student’s conflict behavior, self-ratings of relationship skills, and help seeking behavior, reduction in violence supportive attitudes and attitudes justifying violence in relationships. Knowledge was the only area where control group students improved at a similar rate to treatment groups subjects.</td>
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<tr>
<td><strong>TeenPEACE</strong> PEACE, Inc., Nashville, TN, U.S.A. (Schut &amp; Worley, 1998; Schut et al., 1998)</td>
<td>The school-based program had 12-sessions covering five modules which included relationship abuse overview, substance abuse and violence/coping with stress; values and beliefs/manhood and womanhood, and sexual respect. In a school-based evaluation significant changes from pre- to post-test were limited to knowledge and attitude category. Also, in self-report questionnaires juvenile offenders (assault against a known female) had a significant lowering in their threatening and controlling behaviors and increased respectful behaviors.</td>
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<tr>
<td><strong>Safe Dates</strong> The Centers for Disease Control and Prevention. (Foshee et al. 1998)</td>
<td>The curriculum includes nine-sessions: A dating abuse curriculum, a play about dating abuse, a poster contest, parent materials, a teacher training outline. Students who participated in the Safe Dates program reported 56 % to 92 % less physical, serious physical and sexual dating violence victimization and perpetration than teens who did not participate in Safe Dates. The program has been found to be equally effective for males and females and for whites and non-whites.</td>
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<tr>
<td><strong>BRIGHT:</strong> Building Relationships in Greater Harmony Together NIMH and CDC (Avery-Leaf et al., 1997)</td>
<td>A five-session dating violence prevention curriculum focusing on attitude change, skill enhancement, and support for help-seeking. Students in the treatment group showed significant reductions in their attitudes justifying dating violence as well as a significant increase regarding intention to seek help compared to those in the no treatment group.</td>
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<tr>
<td><strong>Ending Violence Break the Cycle</strong> Nonprofit group (Jaycox et al., 2006)</td>
<td>A three class session program focusing on the law, highlighting legal rights of the victims and legal responsibilities of perpetrators. Students in intervention classrooms showed improved knowledge, less acceptance of female-on-male aggression, and enhanced perception of the helpfulness and likelihood of seeking assistance from a number of sources immediately after the program. There were no differences in recent abusive/fearful dating experiences or violence victimization or perpetration.</td>
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</table>
There also is a substantial amount of variation in the duration of ADV prevention programs. This poses another challenge for practitioners. It is hard to discern what should be the optimal duration for a successful program with long lasting impact. The intensity of the curriculum has varied by program from two half days (Jaffe, Sudermann, Reitzel, & Killip, 1992), to a 10-session program integrated into health classes (Foshee, 1998), to an 18-session community based program (Pitman, Wolfe, & Wekerle, 1998). Program planners must develop an optimum curriculum integrated into the classroom over a significant period of time for long term impact. Based on research, adolescent relationship experts can prescribe the optimal timing and content for such programs which would be of paramount importance to policy makers who seek to mandate state level dating violence prevention education. Lastly, there is a need to develop rigorous evaluation protocols as most programs have been evaluated by the experts who developed the programs. Also, as adolescent dating violence prevention programs are new in nature and often an exploratory initiative, there is a need to look at other prevention curricula (e.g. smoking cessation or other public health concerns) and to compare successful programs in these realms to develop healthy dating relations curricula.
Role of the Government

Policymakers can play a vital role in enhancing the understanding of adolescent dating violence, and preventing and reducing dating violence. This can be accomplished by a variety of efforts like supporting evidence-based prevention programs in schools and communities, analyzing and evaluating existing state and local policies and practices to identify effective strategies to prevent teen dating violence, and by working with health officials to gather surveillance data in states that do not collect information on teen dating violence. In 2009, 15 states had legislation bills introduced to prevent and reduce adolescent dating violence. Currently, 16 states have laws and resolutions that address education about healthy dating relations and prevention of teen dating violence. (National Conference of State Legislatures, 2010)

States have also adopted teen dating violence awareness weeks or months in an effort to draw the public's attention to a national campaign that promotes prevention, safe dating practices and offers information and resources. In 2009, at least five states (Delaware, Hawaii, New Jersey, Pennsylvania and Utah) declared a prevention week or month in February. At least seven states have laws that urge or require school boards to develop curriculum on teen dating violence (Table 2-3). Unfortunately, only a few states have laws that adequately equip teen victims of dating violence with tools for protection and safety, according to a new report from a watchdog group (National Conference of State Legislatures, 2010; Legal Momentum, 2010). The report by Los Angeles, California-based Break the Cycle includes state-by-state report cards that measure how each state treats teen victims of dating violence in comparison with the treatment of adult
domestic violence victims. Only five states -- California, Illinois, Minnesota, New Hampshire and Oklahoma -- received A’s, while nine states received B's. Twenty-three states received sub-par grades, including 11 getting Fs (Breakthecycle, 2010).

Figure 2-2: State Laws to Prevent Adolescent Dating Violence

<table>
<thead>
<tr>
<th>State</th>
<th>Law Summary</th>
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<tbody>
<tr>
<td>Maryland</td>
<td>One section of the Education Law encourages schools to adopt age-appropriate dating violence education into the school curricula.</td>
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<tr>
<td>Florida</td>
<td>Any person who has reasonable cause to believe he or she is in imminent danger of becoming the victim of an act of dating violence, or the parent or legal guardian of any minor child who is living at home and who seeks an injunction for protection against dating violence on behalf of that minor child, has standing in the circuit court to file a restraining order against the accused dating violence abuser.</td>
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<tr>
<td>Georgia</td>
<td>The state board of education is required to develop rape prevention and personal safety education program and a program for preventing teen dating violence for grades 8 through 12.</td>
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<tr>
<td>Illinois</td>
<td>The comprehensive health education program may include instruction on teen dating violence for specified grade levels.</td>
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<tr>
<td>Nebraska</td>
<td>Requires the state department of education to develop a model policy for schools to address teen dating violence through their curriculum.</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Allows the state board of education to teach the psychology and dynamics of teen dating violence when appropriate in elementary, middle and high school.</td>
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<tr>
<td>Ohio</td>
<td>Prescribes the school districts to adopt a dating violence prevention policy and to include dating violence prevention education within the health education curriculum.</td>
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<tr>
<td>Rhode Island</td>
<td>Requires the department of education to develop a model dating violence policy to assist school districts in developing policies for dating violence reporting and response.</td>
</tr>
<tr>
<td>State</td>
<td>Legislation Details</td>
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<tr>
<td>Tennessee</td>
<td>Urges the state department of education to develop a sexual violence/teen dating violence awareness curriculum for presentation at least once in grades 7 and 8 and at least once and preferably twice in grades 9 through 12.</td>
</tr>
<tr>
<td>Texas</td>
<td>Schools are required to develop and implement a dating violence policy. The school policy should provide training for teachers and administrators and awareness education for students and parents. It should also enforce protective orders or school based alternative including counseling for affected students.</td>
</tr>
<tr>
<td>Virginia</td>
<td>Requires the state board of education to develop curriculum guidelines for teaching teen dating violence and all family life education in schools.</td>
</tr>
<tr>
<td>Utah</td>
<td>A resolution that encourages the Utah State Board of Education and Utah State Board of Regents to ensure that all middle school, junior high school, senior high school and post-secondary education programs provide materials and services on domestic and dating violence.</td>
</tr>
<tr>
<td>Delaware</td>
<td>A resolution has been passed in 2009 to create a Teen Dating Violence Task Force to evaluate and make recommendations on policies for education on teen dating violence.</td>
</tr>
<tr>
<td>Maine</td>
<td>A resolution was passed in 2009 that directs the Department of Education to review its policies and rules regarding faculty and student training on the topic of dating abuse, and to review its administrative policies to determine which address dating abuse.</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>A concurrent resolution endorses Rhode Island’s Lindsay Ann Burke Act, and encourages the New Hampshire department of education to devise and implement teen dating violence policies.</td>
</tr>
<tr>
<td>Washington</td>
<td>Requires the state school superintendent to develop a model curriculum. The model curriculum shall include, but is not limited to, instruction on developing conflict management skills, communication skills, domestic violence and dating violence, financial responsibility, and parenting responsibility.</td>
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Screening for Dating Violence

Clinicians and health professionals do not engage adequately in screening for intimate partner violence (Rodriguez, Bauer, McLoughlin, & Grumbach, 1999). Additionally, most of the studies conducted for assessing health professionals engagement in screening for intimate partner violence mostly deal with adult intimate partner violence (Hamberger, Saunders, & Hovey, 1992; Friedman et al., 1992; Plichta, Duncan, & Plichta, 1996). As opposed to adult domestic violence and adult intimate partner violence screening guidelines, most of the medical and health care societies do not recommend a regular screening of adolescents for signs and symptoms of adolescent dating abuse or intimate partner violence.

In contrast to the existing literature on adult populations, there is little research that addresses physician knowledge, screening behaviors, management strategies, or barriers to providing care to those involved in violent dating relationships during adolescence (Sugg & Inui, 1992; Cohall, Cohall, Bannister & Northridge, 1999). Therefore, the role of health professionals and physicians in screening for adolescent dating abuse remains unclear and the factors associated with such screening are not well understood (Brown et al., 2007). However, there has been a debate and some recommendations about screening for ADV. It is advocated that health care professionals who provide sexual and reproductive health care services should routinely screen adolescents for dating violence, and should be knowledgeable about referrals and assistance in the area (Silverman et al., 2004; Roberts, Auinger, & Klein, 2005) because patients will not disclose abuse to health care professionals, even when asked directly (Rickert, Wiemann, & Vaughan, 2005). Additionally, it has been recommended that
medical professionals and health clinics should make information about dating violence hotlines and assistance for assault patients available to all visitors (Decker, Silverman, & Raj, 2005). Primary care pediatricians and family practitioners are in an excellent position to identify adolescents who are at risk for dating violence or have experienced dating violence because of their regular contact with youth for annual health maintenance visits, sports physical examinations, and ill visits (Hamberger & Ambuel, 1998). In addition, many adolescents expect their primary care physicians to inquire about personal problems or high-risk behaviors, even though they may be reluctant to introduce the subject themselves (Rawitscher, Saitz, & Friedman, 1995).

The risk of ADV provides a unique opportunity for clinicians, pediatricians, family practitioners, school personnel and parents to work with one another for healthy development of adolescents and building of normal relations in an adolescent’s life. This is of substantial importance as relational violence in childhood follows a continuum progressing towards violent relationships in adulthood. Also, during times of crises leading to violence in an adolescent’s dating relationship, the aforementioned health professionals, along with parents can play a vital role in secondary prevention, treatment and intervention modalities for providing care to a traumatized adolescent (Williams & Martinez, 1999). Only a few studies have examined physicians’ perceptions and practices regarding screening for adolescent dating violence.

A national assessment of adolescent and child psychiatrists reported that 83% of the clinicians had “ever identified” adolescent dating violence, and 65% reported identifying adolescent dating violence in the past year. Almost 1 in 5 (21.4%) reported screening for adolescent dating violence consistently (screening> 90% of the time), 42%
reported “personally knowing” a teenager who had experienced dating abuse and 6% reported that a patient disclosed incidents of dating violence without direct questions. The clinicians reported more consistent screening for suicidal ideation, substance abuse and inter-parental violence (Brown et al., 2007). A national survey of pediatricians’ violence prevention counseling behaviors provided several insights for inadequate adolescent dating violence screening by physicians. For example, 68% of residents and 73% of practitioners never or rarely screen for domestic violence, 56% of residents and 67% of practitioners never or rarely ask adolescents about their involvement in physical fighting (Borowsky & Ireland, 1999). The participants were asked to rate their level of preparation for providing violence prevention counseling and a majority (76% of residents and 83% of practitioners) rated their training as “inadequate”. Major determinants of more frequent violence prevention counseling were receiving training in the prevention of child/adolescent violence in medical school, residency, or fellowship /continuing medical education. Pediatricians who believed that parents rarely or never follow through on a physician’s advice and anticipatory counseling on violence prevention were less likely to ask or advise patients in these areas (Borowsky & Ireland, 1999). This study illustrated that there is a need for education of adolescents, parents and primary care providers.

Current adolescent dating violence prevention training practices in medical schools have been explored occasionally. An examination of pediatric residents found that residents were knowledgeable about the prevalence of dating violence, but 91% did not routinely screen for dating violence in adolescent patients (Forcier, Patel, & Kahn, 2003). Residents were more likely to ask about dating violence, be concerned, and refer
for counseling when a teen was female or was involved in a physically versus emotionally violent relationship. Resident characteristics associated with screening for adolescent dating violence were, female gender, the number of adolescent patients seen per week, and prior personal experiences with intimate violence. Barriers to screening for dating violence were similar to those for marital violence, with lack of time and insufficient training cited as major barriers. Residents believed that although it is a physician’s role to discuss adolescent dating violence, they are not adequately trained to do so (Forcier, Patel, & Kahn, 2003). The lack of residency training on adolescent dating violence prevention is reflected in clinical practice, untrained physicians seldom include adolescent dating violence screening in their routine interaction with adolescent patients.

Adolescent dating violence is reaching epidemic proportions in the United States and considering the increased attention by academicians, policy makers and parents alike there is a growing emphasis on a public health approach to prevention of youth violence (Satcher, 2001). The traditional crime approach to dating violence emphasizes punishment over prevention while experts have agreed that the prevention focus of the public health approach might be more effective in reducing adolescent dating violence. The public health approach encompasses four steps. First, it is necessary to define the problem based on surveillance that establishes the nature of the problem and the epidemiologic trends of the problem. Second, risk and protective factors associated with the problem have to be identified by epidemiologic analyses. Third, effective and generalizable interventions should be designed, developed, and evaluated. Once these steps are accomplished, dissemination of successful models becomes the fourth step for a coordinated effort to educate and reach out to the public (Satcher, 2001).
It is also noteworthy that some of the major recommendations for prevention programs include having a gender specific approach, having a broader outlook in prevention and starting programs early (Zurbriggen, 2009). Additionally, there are recommendations for incorporation of youth development strategies into programs that target specific risk behaviors (e.g., dating violence) which increases the likelihood of success at preventing negative health outcomes (Zurbriggen, 2009).

**Responding to Dating Violence**

Communities in the United States have a unique system for responding to intimate partner violence. The primary support avenues available to victims include shelter, medical care, mental health services and legal advocacy. Responses to abusive partners may combine mental health services with legal consequences in the civil and criminal justice system. Unfortunately, these systems and protocols have been developed with an adult consumer in mind with little or no attention paid to the rights of adolescents to participate in these safety nets (Breakthecycle, 2007).

It is of paramount importance to approach the issue of ADV by looking at the needs of the victims of abuse and how changes in community and school policies might help the victims. School districts in the United States commonly have clear disciplinary procedures for violence and harassment that occurs on campus. However, frequently schools lack the support systems to enforce such policies meticulously and there is also a need for ensuring that ADV victims retain access to quality education in spite of being victimized in a violent dating relationship. Additionally, responding to incidents of ADV is a duty often performed by the school personnel but, there are no best practices and
national standards which require schools to have a protocol for responding to ADV incidents reported to school personnel. Furthermore, it is unclear if schools in the United States are well prepared to provide the needed medical and legal assistance to victims of ADV. In general, one can dichotomize the needed response to ADV as a legal response and a medical response (as ADV often times involves serious health consequences). Activists and nonprofit groups recommend that schools should provide accommodations for victims of ADV that allow the victims to obtain necessary counseling or medical care and provisions which help victims pursue legal action against the perpetrator (Carlson, 2003; Breakthecycle, 2007; Crime & Violence Prevention Center at California Attorney General’s Office, 2008)

**Legal Response**

School districts have a legal liability to respond to complaints of ADV under federal and state laws. Unlike state laws, federal laws provide the basic framework for the liabilities of schools. Under Title IX, schools that receive federal funds are required to provide the students with the right to be free from sex discrimination and sexual harassment which are often times the components of ADV (Carlson, 2003; Crime & Violence Prevention Center at California Attorney General’s Office, 2008). Also, under the same title, school districts that receive federal funds are liable for student-on-student sexual harassment, and accordingly the acts of ADV that constitute sexual violence. Educational institutes are also required to have a written policy and protocol for responding to adolescent dating violence that qualifies as sexual harassment. Several other federal statutes directly or indirectly make schools liable for responding to and
preventing ADV incidents. For example, schools have the: ‘duty to provide equal protection of laws’, ‘duty to train employees on sexual harassment policies’, and ‘exercise limitation of freedom of speech at schools’. Additionally, schools that receive funds under the Safe and Drug-Free Schools and Communities Act or No Child Left Behind Act have a ‘duty to promote school safety’, ‘duty to track adolescent dating violence’, and ‘provide unsafe school choice option.’ Under these federal mandates the schools are often required to report ADV related crimes to the United States Department of Education annually (California Women’s Law Center, 2007; Crime and Violence Prevention Center at California Attorney General’s Office, 2008; Office of Safe and Drug-Free Schools, 2010).

In general, many states have mandates/laws for providing safe schools, combating sexual harassment in schools, responding to hate violence, protecting students, creating safety plans for school districts, reporting child abuse, and duties for supervising students and disciplining offenders. Schools are liable under these state laws for a failure to provide a safe and healthy learning environment. As ADV can cause severe health and safety hazards for victims and other students, school districts and schools have to consider ADV a potential threat for possible liabilities. Additionally, a few states have laws or proposed legislations which specifically recommend having protocols and procedures to respond to ADV incidents in schools (National Conference of State Legislatures, 2010; Legal Momentum, 2010).

Rhode Island has a state law which mandates that each school district's policy should include a policy for responding to incidents of dating violence, apart from providing dating violence education to students, parents, staff, faculty and administrators,
in order to prevent dating violence and to address incidents involving dating violence (National Association of State Boards of Education, 2010). Similarly, states like Hawaii, Ohio, Nebraska, Oklahoma, and South Carolina have laws or proposed bills that require or would require each school district to develop and adopt a policy to address incidents of dating violence involving students at school, which must include a statement that dating violence will not be tolerated and must also include dating violence reporting procedures, guidelines to responding to at-school incidents of dating violence and discipline procedures specific to school incidents of dating violence (National Conference of State Legislatures, 2010; Legal Momentum, 2010). Additionally, as an exception, a few cities and school districts in the United States have their own laws and mandates for responding to ADV incidents. For example, Oakland, California has a policy that requires students to receive age-appropriate information about dating abuse. It also requires staff to respond promptly to incidents of dating abuse, and prohibits retaliation against anyone involved in the school complaint process. The policy applies to students on school grounds, while traveling to and from school or school-sponsored activities, and during lunch periods, whether on or off-campus (Legal Momentum, 2010).

How to provide culturally competent and legally feasible services for adolescent victims of dating violence is a subject that deserves lengthy attention. For example, states can also aid the victims of ADV by improving access to obtaining protective orders in response to abuse by a dating partner. Protection orders are civil court orders that a victim can request from the court to get protection from an abuser. The protection order can order an abuser to stop harming the victim, stop having contact with the victim, or stop contacting the victim at work, school, or at the victim’s children's school or daycare
(National Centers for Victims of Crime, 2005). Currently, nine states allow minors to obtain protective orders without adult approval if they meet certain criteria, such as being a minimum age (often 16) or having a specific relationship with the abuser, such as having a child together (Breakthecycle, 2007). However, adolescents face unique barriers in the civil and criminal justice systems. Several state laws restrict adolescents from applying for a protective order as they are considered minors or the nature of relationship with the abusive partner does not qualify for a protective order. Additionally, even those states that do permit an adolescent to apply for a protective order, many require a parent or other adult to apply for protection on the adolescent victim’s behalf. A few non profit organizations have also discussed the need for schools to have enforcement procedures and disciplinary measures for violations of protection orders or stay-away orders by the perpetrators of ADV (California Women’s Law Center, 2007; Breakthecycle, 2007; Crime and Violence Prevention Center at California Attorney General’s Office, 2008).

Studies show that most adolescents who are victimized in a dating relationship refrain from telling anyone, especially their parents, about the violence experienced in dating relationships. For such victims, a requirement of parental or guardian consent becomes an insurmountable obstacle to accessing the justice system. As a result, victims may remain in dangerous relationships simply because they do not want to tell or involve their parents. Further restricting an abused adolescent’s privilege is the fact that, in many states, protective orders are not available against an abusive partner who is a minor. Finally, adolescent victims often look for medical and legal aid which ensures confidentiality. A mandated report impacts the trusted relationship between the provider and the adolescent client, potentially exposing the adolescent victim to undesired
consequences and preventing a provider from following the wishes of the ADV victim who presents as a care seeking client. To maintain trust and rapport, mandated reporters must clearly understand their reporting obligation and impart this information to the victims of ADV who seek care. Several laws in place, regulations and modalities to protect and assist ADV victims have been discussed; but apart from the civil and criminal enforcements for perpetrators, it is recommended that schools must have restorative practices to allow perpetrators of abuse to recognize and change their behaviors through counseling and support services. School discipline (e.g. suspensions, detentions) and police involvement should only be used as a last resort if the abuse poses a significant danger to the school community (California Women’s Law Center, 2007; Breakthecycle, 2007; Crime and Violence Prevention Center at California Attorney General’s Office, 2008; Legal Momentum, 2010).

**Medical Response**

Another crucial component of providing aid to victims of ADV is the provision of timely medical care in cases where the victim suffers severe physical and mental health hazards. The victims of ADV need medical aid which could range from preventive behavior counseling to actual therapeutic remedies depending on their risk behaviors or injuries and illnesses suffered due to victimization. For example, analysis of the 2001 YRBS data showed that young women who have experienced dating violence were found to less likely use condoms consistently, more likely to fear the perceived consequences of negotiating condom use than other young women, and less likely to report recent condom usage (Silverman, Raj & Clements, 2004). In the same study, young women who
reported being hurt in the previous year from dating violence were also approximately twice as likely as other young women to report having been pregnant (Silverman, Raj & Clements, 2004). Similarly, in a study of 1,641 sexually active young women, those who reported physical and sexual violence were more likely to have been diagnosed with an STI or HIV than those who experienced no dating violence (Decker, Silverman, & Raj, 2005). Another study with 409 participants found that the young women who reported a history of abuse, were about twice more likely to report having a sexually transmitted infection than other young women (Bauer et al., 2002). Further complicating the issue is the association of ADV victimization with psychological health hazards (e.g. depression and feelings of sadness or hopelessness in an abusive relationship can also cause risky sexual behavior). Depression may lower the victim’s inclination to use protection during intercourse or make them become less concerned about the potential consequences of unprotected sex (Howard & Wang, 2005). Therefore, the medical response to a victim of ADV has to be elaborate and often needs substantial amount of skills and confidence building ability on the part of the responder with confidential participation most often being the utmost concern of a victim of ADV (National Crime Prevention Council, 2005; Crime and Violence Prevention Center at California Attorney General’s Office, 2008).

Many professionals in the service sector are designated as mandated reporters of child abuse and neglect. Because state child abuse laws can be broadly written, disclosure of abuse to a mandated reporter may result in a report to law enforcement or child protective services. Mandated reporting can deter an adolescent victim from accessing available services or making a full disclosure of the abuse incident. Because parents have the right to determine medical and mental health treatment for their children, care
providers can navigate the process by building trust with the family of the victim and by helping the victim involve adult caretakers in the family. Also, certain state laws may allow adolescents to independently access certain special services, including pregnancy-related treatment, access to contraceptives, STI testing and treatment, substance abuse treatment, rape and sexual assault services, and certain mental health treatment. Because of the associated health risks and adolescent’s concerns about confidentiality, state laws that allow for independent access to a broad range of special services provide communities an opportunity to respond to adolescents who are victimized in a dating relationship. It is recommended that even though privacy of health records is a complex issue involving both federal and state laws, addressing the full picture of confidentiality concerns to adolescents requires providers to discuss the privacy of records with their adolescent clients (Breakthecycle, 2007; Peace Over Violence, 2008; California Women’s Law Center, 2007).

**School Response Protocol**

As of now there are no national standards and protocol guidelines for responding to ADV incidents in schools or communities. Apart from the role played by government, interest groups often recommend a proactive approach by each school, school personnel, school district and the associated communities (Breakthecycle, 2007; Peace Over Violence, 2008; California Women’s Law Center, 2007). It is recommended that schools should have a widely advertised policy statement saying that, “Dating abuse and sexual assault will not be tolerated by the school”. Additionally, a staff member should be assigned as the “Dating Abuse Coordinator” and students, parents, and teachers should be
adequately notified that these personnel are the initial points of contact who handle all incidents, complaints and requests relating to ADV. Keeping in view that victims and perpetrators of ADV typically need legal and medical aid, another important recommendation is for creation of a system of referrals to community-based organizations and mental and physical health care services. As victims and perpetrators of ADV also interact with each other on school premises, it is suggested that accommodations be granted to victims of ADV to assist them in avoiding the abusive dating partner on campus. Provisions like alterations of locker assignment or work group assignment, lab assignments, schedule changes, and designated routes for the victim and the perpetrator in and out of the school building have been recommended (Breakthecycle, 2007; California Women’s Law Center, 2007; Crime and Violence Prevention Center at California Attorney General’s Office, 2008).

One of the critical tasks faced by school personnel as a legal challenge is enforcement of the school’s dating violence policy and enforcement of civil or criminal orders of protection. In relation to this challenge, it is advocated that faculty, police officers, security guards, resource officers, and staff that work at the school must be adequately trained on dating violence and sexual assault. Furthermore, it has been emphasized that apart from training school personnel, schools should adopt in-school stay-away orders that require the perpetrator of ADV to maintain a certain distance from abused victim and prohibit the perpetrator from contacting the victim. Methods for enforcing civil or criminal orders of protection held by students have to be developed in this context (Breakthecycle, 2007; Peace Over Violence, 2008; California Women’s Law Center, 2007).
2.8. Theoretical Foundations for Assessing Dating Violence

Interventions

To assess the perceptions and practices of high school nurses in relation to adolescent dating violence, an instrument was created based on a theoretical framework which was drawn from the following sources: the Health Belief Model (Janz, Champion, & Strecher, 2002) and the Transtheoretical Model (Prochaska, Redding & Evers, 2002).

Health Belief Model: The Health Belief Model (HBM) was developed by a group of psychologists in an attempt to provide an explanation for the lack of people’s participation in vaccination and disease screening programs (Rosenstock, 1990). The HBM has been applied extensively to studies of health behavior (Janz et al., 2002). The HBM proposes that people will engage in a health behavior or action intended to improve personal health based on five fundamental constructs. The first construct is perceived susceptibility. This determines the extent to which a person feels vulnerable to a given health risk or disease condition. The second construct is perceived severity which describes an individual’s evaluation of the seriousness of the condition and the severity of the consequences of no action regarding the disease condition/health risk. The third and fourth constructs refer to the perceived positive outcomes/benefits and costs/barriers/difficulties/impediments to taking the desired action. These constructs are termed perceived benefits and perceived barriers respectively. The fifth construct pertains to the strategies or events that are intended to trigger a person’s readiness for action and are known as cues to action. These cues can be either external or internal.
A meta-analysis involving the constructs of HBM showed that the best predictors of health behavior were perceived benefits and perceived barriers (Harrison, Mullen, & Green, 1992). Therefore, the construct *perceived barriers* will be used in this study to assess if there are excessive difficulties or perceived costs and impediments (perceived barriers) to assisting victims of dating violence.

*Transtheoretical Model*- The Transtheoretical Model (TTM) was originally developed to compare smokers utilizing psychotherapy versus those who initiated quitting attempts on their own as a behavior change (Prochaska, 1979). TTM initially suggested that people progress through five discrete stages in order to change a particular health related behavior and subsequently, a sixth stage was added (Prochaska & DiClemente 1983). The Stages of Change theory is comprised of *precontemplation* (the stage at which a person does not intend to change his/her behavior within the next six months. This stage implies a lack of awareness or avoidance of change), *contemplation* (the stage at which a person is seriously thinking about changing his/her behavior and intends to do so within the next six months. The contemplation stage is characterized by ambivalence and procrastination), *preparation* (the stage at which a person intends to take action within the near future. The individual typically has a plan in place at this stage, and s/he might begin to take some behavioral steps toward action), *action* (the stage at which a person has modified his/her behavior for a short period time. The action stage involves overt behavioral changes and requires a commitment of time and energy), *maintenance* (the stage at which an individual has modified his/her behavior for a longer period of time. At this stage, the person works to prevent relapse, and consolidate gains associated with action), *relapse* (the stage at which an individual used to, but no longer, engages in the
modified or desired behavior) and termination (when the behavior change has been solidified ceases to be potentially reversed) (Prochaska et al., 2002).

The model was originally applied in studies of smoking cessation, but has since been applied to a broad range of health behaviors (DiClemente & Prochaska, 1982; Prochaska et al., 2002). Additionally, the Stages of Change has also been used in assessing individual and organizational behavior change (Price & Oden, 1999; Khubchandani, Price & Dake, 2009). In terms of having a specific school based protocol in order to respond to a dating violence incident the Stages of Change theory suggests that a relevant goal would be to assist the student victims of adolescent dating violence. Based on what the high school nurses say about having a specific protocol, several measures can be taken by the schools to better assist the victims and ameliorate the problem of adolescent dating violence. For example, consciousness raising at earlier stages could result from the provision of information or training on the impact of dating violence. Once the school administration is sensitized to the issue they might end up considering a response protocol for addressing a dating violence incident/ situation.

Adolescent Dating Violence Knowledge Scale- A knowledge scale was created to assess knowledge of the study participants on Adolescent dating Violence. This scale was developed through a comprehensive review of literature. Several factual statements about adolescent dating violence were considered. To be considered for the knowledge scale inclusion criteria was applied to the factual statements. Those factual statements which were supported by two or more peer reviewed national publications or had been published in prominent journals were considered for inclusion in the adolescent dating
violence knowledge scale. A total of 9 statements were finally included as items of the knowledge scale. These statements (items on knowledge scale) were as follows-

a. Abuse in a dating relationship occurs more commonly in students with a lower socioeconomic status compared to students with higher socioeconomic background.

b. Physical dating violence is more common against adolescent females than males.

c. Less than 5% of high school students experience physical dating violence.

d. Adolescent dating violence occurs more frequently among racial and ethnic minorities as compared to whites.

e. Girls who report physical or sexual dating abuse have higher rates of drug, alcohol, and tobacco use than girls who report no abuse.

f. Dating abuse can lead to risky sexual behaviors that can result in unintended pregnancy, sexually-transmitted diseases, and HIV infections.

g. Patterns of dating violence behavior often start in adolescence early and carry through into adult relationships.

h. Children who have been abused are more likely to be perpetrators or victims of dating violence.

i. Victims of dating violence typically talk about the abuse with their peers.
2.9. Summary

Adolescent dating violence is a significant problem in the United States which relates to the health and wellbeing of adolescents in a variety of ways. Adolescent dating violence can take several forms which include physical abuse, sexual abuse, verbal abuse, psychological and emotional abuse. The victims and perpetrators of adolescent dating violence have been found to have lower academic achievement and quality of life. Additionally, physical, mental and sexual health hazards are more likely to be observed in victims and perpetrators of adolescent dating violence as compared to their peers who are not in an abusive adolescent romantic relationship. The risk factors, predictors and health outcomes are often times inseparable in the study of adolescent dating violence epidemiology. However, observational studies have reported that family environment (i.e., parenting style, socioeconomic status, quality of parental relationships, and interpersonal relationships) have an influence on the development of adolescents and their romantic relationships.

A few public health programs have looked at the prevention of adolescent dating violence and several of these programs generally aim at improving the knowledge of adolescents about healthy relationships. However, most of the programs have several methodological and efficacy related concerns as the desired outcome (i.e., reduction in victimization and perpetration in a dating relationship) has not been studied frequently. Another prevention approach has been recommended; some interest groups recommend that individual schools and school personnel should increase their involvement in prevention efforts for adolescent dating violence. There are a variety of recommendations like educating adolescents about healthy dating relationships, preventing adolescent
dating violence by using policies and protocols for students, providing staff and faculty training on adolescent dating violence, and having response protocols. Many of these recommendations sometimes coincide with the state and federal government recommendations which intend to promote the health and safety of adolescents in schools. Apart from schools, school personnel, and parents, adolescents in the US schools can benefit greatly from the aforementioned recommendations but there have been no systemic national investigations on dating violence school policies, dating violence response protocols or school personnel’s beliefs, knowledge and practices in relation to preventing and responding to adolescent dating violence. Therefore, assessing school nurses regarding their knowledge, practices and perceptions about adolescent dating violence could help to serve as a baseline for creating educational material, uniform response protocols, and dating violence prevention policies in the US schools.
Chapter 3

Methods

This chapter will describe the methods used in this study. This chapter includes the following sections: Participants, Instrument, Data Collection and Data Analysis.

3.1. Participants

A national random sample of high school nurses was selected from a directory of school nurses from across the United States. The database of 3647 high school nurses was obtained from the National Association of School Nurses. An a priori power analysis was completed to determine the number for the sample required to minimize type II error rate. Based on an eligible population of 3647 high school nurses and a 50/50 split with regard to the practice of interest (i.e., it was assumed that approximately 50% of school nurses would report that they assist victims of adolescent dating violence), it was determined that a sample of 348 school nurses would be needed to make inferences to the total population with a sampling error of ± 5% at the 95% confidence level (Price, Dake, Murnan, Dimmig & Akpanudo, 2005). Factoring in a potential non-response rate of approximately 50%, 750 school nurses were randomly selected to receive surveys.
3.2. Instrument

A four-page, 17 item instrument was developed. The instrument was developed for this study based on a comprehensive review of the literature on adolescent dating violence. The survey was designed to assess school nurses’ practices and perceptions on adolescent dating violence in schools. The first section of the survey included two items to assess the nurses’ perceived extent of dating violence in schools. The first scale (questions 3-10) explored the practice of the nurse’s school in relation to adolescent dating violence. The scale assessed:

- Whether the school’s violence prevention/Safe School policy specifically addresses teen dating abuse;
- Whether training to assist victims of teen dating abuse has been provided to the respondent’s school personnel in the past 2 years,
- If there is a school committee that meets periodically to address health and safety issues which include teen dating abuse,
- If the schools keep teen dating abuse complaints in a confidential file separate from academic records,
- If the schools conducts periodic student surveys that include questions on teen dating abuse behaviors,
- If the schools have information posted about teen dating abuse that is easy for students to find. Additionally, this section also explores if the school educates students about teen dating abuse prevention, healthy dating relationships and where to report an incident of teen dating abuse.
An item to examine the total number of student victims of dating violence assisted by the responding school nurse was included in the questionnaire. The item continued to inquire about the assistance provided and the gender distribution of the dating violence victims assisted by the school nurse. There were nine potential options for assistance provided; referred the victim to the school counselor, reported the incident to child protection agencies, helped the victim obtain protective orders, called the parents of the victim to inform them, provided primary care, referred student to legal authorities, reported the incident to teachers, referred the victim to a physician/medical clinic, referred the victim to school social worker, and other.

The second section of the survey consisted of three questions. The first question examined the school practices of the respondent in relation to having a dating violence incident response protocol. The potential responses were based on Stages of Change theory (precontemplation, contemplation, preparation, action, and maintenance). The potential response options were, we have never seriously thought about creating a protocol for responding to a dating violence incident, we have been thinking about creating a protocol for responding to a dating violence incident, we have made plans to implement a protocol for dating violence incidents in the next school year, we started this school year following a protocol for dating violence incidents, we have been following a response protocol for dating violence incidents for 1 or more school years. The next question in this section explored the respondent’s perception of the role of various school personnel in assisting student victims of dating violence; the respondents were asked to identify the role of various individuals/groups in assisting adolescent dating violence victims (the groups were health teachers, school counselors, school nurses, school
administrators, school social worker, peers, and police officers). For each group the school nurses were asked to identify the roles (major role to no role) for each.

The third question in the same section assessed the school nurses’ perceived barriers to assisting victims of dating violence. Potential barriers were listed for the responding nurse and the respondent’s school which included the following: it is not my job to help victims of dating violence, I do not have the private space needed to help victims of dating violence, I do not have the time to help victims of dating violence, I do not have the training to help victims of dating violence, parents will not approve of my involvement in helping victims of dating violence, dating violence is a minor issue compared to other student health issues I deal with, and other. Similarly, the barriers for the school were listed as follows: it is not the school’s responsibility to help victims of dating violence, our school does not have enough staff to help victims of dating violence, personnel in our school do not have the time to help victims of dating violence, personnel in our school do not have the training to help victims of dating violence, parents will not approve of school’s involvement in helping victims of dating violence, dating violence is a minor issue compared to other student health issues the school deals with, the school administration does not want to deal with this sensitive issue, and other.

The third section assessed the perceived role of school nurses in preventing adolescent dating violence and responding to a situation where a student has been victimized in a dating relationship. This was examined by statements with four response options with a Likert-type scale ranging from strongly agree to strongly disagree. The statements included the following: students who are victimized in a dating relationship need to be encouraged to report the assault to the school nurse, it is the role of school
nurses to cultivate the trust of students so that students report any occurrence of violence in their dating relationships, it is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students, school nurses should be well trained to deal with a student dating violence incident, school nurses should assist the victims of dating violence by referring them to legal authorities, school nurses should be involved in developing the protocols that focus on how to deal with dating violence situations, it is the role of school nurses to work closely with other school personnel to improve their skills in dealing with students who are victims of dating violence. The second part of this section assessed the knowledge of school nurses by asking them to agree or disagree with factual statements on adolescent dating violence. A knowledge scale was created for this purpose based on a comprehensive review of literature.

The final section of the survey identified participants demographic characteristics including sex, race/ethnicity, age, years worked as a school nurse, employment status, certification status, location of the school, number of schools and students served highest level of education of the nurse, racial and ethnic composition of the students in the school of the respondent, and formal training received in the area of adolescent dating violence.

3.3. Instrument Testing

3.3.1. Validity

Face validity for the items was established by constructing the items after reviewing the current literature in the area of adolescent dating violence. Content validity of the instrument was established by expert review (n=13) of the instrument. Experts
were published authorities in the area of school nursing, adolescent dating violence and/or survey research. Minor wording changes to some items were suggested by reviewers and were incorporated into the final instrument. An exploratory principal components analysis (PCA) was conducted to assess the construct validity of the instrument. Bartlett’s test of sphericity ($p < .05$) and the Kaiser-Meyer-Oklin value ($>.70$) supported the factorability of the correlation matrix. To help establish construct validity, principal axis factoring with subsequent varimax rotation for perceptions of the roles that school personnel should play in assisting victims of ADV (questions 14a-14g), school policies and practices on ADV prevention (questions 3-9), perceptions of the roles of school nurses in relation to preventing and responding to ADV (questions 16a-16h), nurses knowledge on ADV (questions 17a-17i), barriers to assisting student victims of ADV (questions 15a1-15a7 and questions 15b1-15b8) was computed. This analysis determined whether the items on the survey instrument clustered in their appropriate subscales. The Eigenvalue of the factor scree plot demonstrated that the instrument consisted of eight separate factors. The minimum factor loading for the interpretation, or agreement of correlation of each item with the total pattern of responses was set at the absolute value of .30 (DiLorio, 2005). The factor matrix for the subscales is presented in Table 3.1.
Table 3.1: Principal Components Analysis with Varimax Rotation

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1*: Perceptions of the roles of school nurses in relation to preventing and responding to ADV. 2*: School policies and practices on ADV prevention 3*: Perceived barriers to assisting student victims of ADV (personal & school related barriers) 4*: Perceptions of the roles that school personnel should play in assisting victims of ADV 5*: Nurses knowledge on ADV 6*: Parental approval of nursing involvement 7*: Perceived importance of ADV 8*: Other

3.3.2. Reliability

The subscales were assessed, using final survey research data, to establish internal reliability (Cronbach alpha). Nurses were asked to rate the extent of ADV problem in their school and US schools by two items on a scale of 1 (no problem) to 5 (major problem). An internal reliability analysis for these two items was conducted (Cronbach alpha = 0.72) and found to be acceptable. Nurses were asked to identify the roles that school personnel should play in assisting victims of ADV on a Likert type of scale (major problem/ minor problem/ no problem). Specifically, the nurses were asked to rate the roles of health teachers, school counselors, school nurses, school administrators, school social workers, students (peers), and school resource officers (police). An internal
reliability analysis for this scale was conducted and was found to be acceptable (Cronbach alpha= 0.62).

The next item assessed the responding nurse’s school policies and practices for preventing and reducing ADV. Nurses were asked if their schools taught students about healthy relationships, where to report an incident of ADV, and ADV prevention. Also, the nurses were asked about school practices on ADV prevention (e.g. whether they were provided training on ADV in the past 2 years, whether their school has information posted about ADV that is easy for students to find, whether their school conducts periodic student surveys that include questions on ADV behaviors, and if their school’s violence prevention/Safe School policy addressed ADV. An internal reliability analysis for this scale was conducted and was found to be acceptable (Cronbach alpha= 0.70).

Nurses were also asked to rate their agreement with a series of statements on what should be the roles of school nurses in relation to preventing and responding to ADV. An internal reliability analysis for this scale was found to be acceptable (Cronbach alpha= 0.86). A series of factual statements from peer reviewed scientific journals and government reports were used to assess the knowledge of high school nurses about ADV. On the questionnaire a knowledge scale was used for this purpose and was found to have acceptable reliability (Cronbach alpha= 0.61).

Finally, school nurses were asked to report the number of victims of ADV assisted by them in the past 2 years, the gender distribution of the victims assisted, and the type of assistance provided. An internal reliability analysis for this item on assisting ADV victims was found to be acceptable (Cronbach alpha= 0.69). Nurses were asked to identify barriers to assisting student victims of ADV. The barriers were assessed by 2
items (personal barriers and barriers for school) and an internal reliability analysis for these 2 items was found to be acceptable (Cronbach alpha= 0.63).

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<td>0.54 (r)</td>
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<td>0.70</td>
<td>0.70 (κ)</td>
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<td>0.64 (r)</td>
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<tr>
<td>Personal Barriers and School Related Barriers</td>
<td>2</td>
<td>0.63</td>
<td>0.58 (κ)</td>
</tr>
</tbody>
</table>

(κ) = Kappa coefficient  (r) = Pearson’s coefficient

High school nurses (n=250) in the United States were sent an email invitation to participate in stability-reliability (test-retest reliability) analysis of the questionnaire. A small group (n=21) agreed to complete the questionnaire two times within 10 days. Standard techniques to increase the response rate were employed. Pearson’s correlation coefficients and Kappa coefficients were computed. Average of coefficients for individual items on the questionnaire has been displayed in Table 3.2.
3.4. Procedures

A review of the literature indicated monetary incentives, personalization of letters and envelopes, use of color paper for the questionnaire, limited length of the questionnaire (4 pages), self-addressed stamped envelopes and follow up mailings increase response rates (Erwin & Wheelwright, 2002; King, Pealer, & Bernard, 2001). The survey protocol was based on this information and included a three-wave mailing. Approval was granted by the University of Toledo Human Subjects Committee prior to the first mailing. The first wave included a personalized letter, hand signed in contrasting ink. Personalized letters and questionnaires increase response rates for mail surveys (OR=1.16) (Edwards et al., 2002). Also included was a copy of the survey on pastel colored paper, a $1.00 bill, and a prestamped self-addressed envelope. Monetary incentives also increase the response rate (OR=2.02) (Edwards et al., 2002). Both the outgoing and return envelopes had first class postage stamps and were coded to reduce costs and duplicate mailings.

The second wave included a hand signed cover letter, questionnaire, and a self-addressed stamped return envelope. Edwards et al. (2002) found that sending a replacement survey to non-respondents increased return rates. The second mailing was sent two weeks after the first wave. Respondents were reminded to disregard the second mailing if they had previously completed the survey (Dillman, 2006). The third wave protocol was a repetition of the second wave protocol and was mailed four weeks after the initial mailing, or two weeks after the second mailing. The purpose of the reminder was to stimulate responses from the non-respondents (Dillman, 2006; King et al., 2001). The aforementioned procedures reduced the non-respondent bias and increased the external validity of the results.
3.5. Data Analyses

The data were analyzed using the Statistics Package for Social Sciences (SPSS) version 16.0. The following variables were recoded for the purpose of data analyses:

Race

Race of the participating nurse has been recoded in 2 categories (White/ Non-Whites)

Age

The entire population of the respondents has been categorized in 2 groups based on age (<50 years of age/ ≥50 years of age)

Level of Education

The level of education was used to categorize the respondents in 2 groups (≤ Bachelors degree/ > Bachelors degree)

Employment Status

Employment status was used as an independent variable with 2 categories (Full time/Part time)

Certification Status

Professional certification was used for hypotheses testing as an independent variable with 2 categories (Yes/ No).

Training on ADV

One of the independent variables used for hypotheses testing was the training of nurses on ADV. This variable had 2 categories of responses (Yes/No).
Perceived extent of ADV

Nurses were asked to rate the extent to which ADV was a problem in their schools (scale of 1-5; No problem-Major problem). The median rating was ‘3’. Therefore, the perceived extent to which ADV was a problem was recoded in 2 groups based on a median split (Low <3 and High ≥3).

Duration of employment

The median duration of employment as a full time nurse for the entire population was 12 years. Based on the median duration of employment the respondents were grouped into 2 categories (≤12 years and >12 years of employment).

Number of Schools Served

The median number of schools served by the entire population was 1 school. Based on the median number of schools served by the respondents they were grouped in 2 categories (served 1 school and served more than 1 school).

Stage of Change

As discussed earlier, based on Stages of Change theory school nurses were asked to identify the current practices of their school in relation to having a protocol for dealing with an ADV incident. The nurses’ responses were categorized in 2 groups (presence or absence of protocol). The 2 categories were computed based on precontemplation stage, contemplation stage, and preparation stage (absence of protocol) or action stage and maintenance stage (presence of protocol).

Perceptions of roles of various school personnel

School nurses were asked to identify the role that various school groups should play in assisting victims of ADV (major role/ minor role/ no role). The perceived
roles were grouped in two categories (major role and minor role or no role). Data were recoded accordingly.

**Assisting victims of ADV**

This was a continuous variable recoded in 2 categories. Those nurses who reported assisting victims of ADV were coded as ‘yes’ and those nurses who did not assist any victims of ADV in the past 2 years were coded as ‘no’ assistance provided.

The following statistical procedures were utilized: descriptive statistics (i.e., frequencies, percentages, or mean and standard deviation), Pearson chi square tests ($\chi^2$), independent samples $t$-tests, paired samples $t$-tests, one way analysis of variance (ANOVA) and post-hoc Tukey HSD tests, and binary logistic regression.

The research questions and hypotheses are matched with the corresponding survey items and data analyses on the matrix in Appendix I. Level of significance was set *a priori* at $p<0.01$ due to multiple hypotheses testing to reduce the risk of type I errors.
Chapter 4

Results

The results of the current study are presented in this chapter. The sections in this chapter include: Response Rate, Demographics and Background Characteristics of the Respondents, Perceived Extent of Adolescent Dating Violence, Nurses’ Perceptions of the Roles that School Personnel Should Play in Assisting Victims of ADV, Stage of Change for Having a Protocol to Respond to Incidents of ADV, School Policies and Practices for Preventing ADV, School Nurses’ Assistance to Victims of ADV, School Nurses’ Perceived Roles in Preventing and Responding to ADV, Nurses Knowledge on ADV, Barriers to Assisting Victims of ADV, Selected Predictors of Assisting Victims of ADV, Hypotheses Tests, and Summary.

4.1. Response Rate

A national random sample of high school nurses (n=750) selected from the database of the National Association of School Nurses was sent the questionnaire on adolescent dating violence for this study. After a three wave mailing process, 443 high school nurses completed and returned the questionnaire of which 39 were not eligible for participation (e.g. academic professor, no longer a school nurse, wrong address-
undeliverable, elementary school nurse, etc). The response rate was 57% (404/711).

4.2. Demographics and Background Characteristics of the Respondents

The demographic and background characteristics of the high school nurses who participated in this study are described in Table 4-1. Of the total respondents, the majority were female (98.3%), white (94.1%), and 50-59 years old (56.4%). An overwhelming majority of the nurses had a bachelor’s degree or higher (87.9%), and was employed full time (88.4%). Less than one third (30%) of the nurses had any formal training on ADV, whereas about two third (68.6%) of the nurses were certified with either a state certification (46.5%), national certification (8.9%), or both (13.1%). Almost half (47.3%) of the respondents practiced nursing in a suburban location and a little less than one third (30.9%) of the respondents practiced nursing in a rural location. The average duration of employment as a full time school nurse was 13.40 years (S.D=±8.94). The average number of schools served by each nurse was 2.84 (S.D=±2.85), while the average number of students served by each nurse was 1659.5 (S.D=±1503.5).

4.3. Perceived Extent of Adolescent Dating Violence

Respondents were also asked to rate their perceptions of the extent of the ADV problem in US schools and in their own schools on a scale of 1 (No problem) to 5 (major problem). The average perceived extent of the ADV problem in US schools was 3.35 (SD=0.71) and the average extent of the ADV problem in the nurses’ school was 2.65 (SD=0.91). The median extent for US schools and the schools of the respondents was 3.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>N</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female</td>
<td>397</td>
<td>98.3</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>7</td>
<td>1.7</td>
</tr>
<tr>
<td>Age</td>
<td>20-29 Years</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>30-39 Years</td>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>40-49 Years</td>
<td>74</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td>50-59 Years</td>
<td>228</td>
<td>56.4</td>
</tr>
<tr>
<td></td>
<td>60+ Years</td>
<td>78</td>
<td>19.3</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>African American</td>
<td>11</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>3</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>6</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>380</td>
<td>94.1</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Location of School</td>
<td>Urban</td>
<td>86</td>
<td>21.3</td>
</tr>
<tr>
<td></td>
<td>Suburban</td>
<td>191</td>
<td>47.3</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>125</td>
<td>30.9</td>
</tr>
<tr>
<td>Highest Level of Education</td>
<td>Associates Degree</td>
<td>24</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>24</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td>Bachelors Degree</td>
<td>185</td>
<td>45.8</td>
</tr>
<tr>
<td></td>
<td>Masters Degree</td>
<td>167</td>
<td>41.3</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>4</td>
<td>1.0</td>
</tr>
<tr>
<td>Employment Status</td>
<td>Full time</td>
<td>357</td>
<td>88.4</td>
</tr>
<tr>
<td></td>
<td>Part time</td>
<td>46</td>
<td>11.4</td>
</tr>
<tr>
<td>Certification Status</td>
<td>Yes</td>
<td>277</td>
<td>68.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>127</td>
<td>31.4</td>
</tr>
<tr>
<td>Certification Type</td>
<td>State</td>
<td>188</td>
<td>46.5</td>
</tr>
<tr>
<td></td>
<td>National</td>
<td>36</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>Both</td>
<td>53</td>
<td>13.1</td>
</tr>
<tr>
<td>Training on ADV</td>
<td>Yes</td>
<td>121</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>283</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S.D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years Worked as School Nurse</td>
<td># Years full time</td>
<td>13.40</td>
<td>8.94</td>
</tr>
<tr>
<td></td>
<td># Years part-time</td>
<td>1.85</td>
<td>3.88</td>
</tr>
<tr>
<td>Service Provided</td>
<td>Schools served</td>
<td>2.84</td>
<td>2.95</td>
</tr>
<tr>
<td></td>
<td>Students served</td>
<td>1659.5</td>
<td>1503.5</td>
</tr>
<tr>
<td>Student Population</td>
<td>% Whites</td>
<td>68.61</td>
<td>28.01</td>
</tr>
<tr>
<td></td>
<td>% Non-Whites</td>
<td>31.16</td>
<td>27.97</td>
</tr>
</tbody>
</table>

N=404
4.4. Nurses’ Perceptions of the Roles that School Personnel Should Play in Assisting Victims of Adolescent Dating Violence

Nurses who participated in the study were asked to rate the role of various school personnel in assisting victims of ADV. More than 9 in 10 believed that school counselors (95.3%) and school nurses (90.3%) should play a major role in assisting victims of ADV (Table 2). The majority (>60%) of the responding nurses believed that all of the school personnel (health teachers, school administrators, school social workers, and school resource officers) should play a major role in assisting victims of ADV. More than one third believed that health teachers (35.1%) and peers (45.3%) had a minor role or no role in assisting victims of ADV. Additionally, a little more than half (52.7%) of the nurses also believed that students (peers) should play a major role in assisting victims of ADV.

4.5. Stage of Change for Having a Protocol to Respond to Incidents of Adolescent Dating Violence

Nurses were asked to best describe their school practice with respect to having a protocol (or procedure) to follow when a student reports an incident of dating violence based on the Stages of Change Theory. A majority (57.9%) of the school nurses agreed that their school personnel have never seriously thought about creating a protocol for responding to a dating violence incident (i.e. precontemplation). About one in seven (13.6%) nurses affirmed that their school personnel started following a protocol for dating violence incidents in the current year or they had been following a response protocol for dating violence incidents for more than one school year.
<table>
<thead>
<tr>
<th>Group</th>
<th>Major Role N (%)</th>
<th>Minor Role N (%)</th>
<th>No Role N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Counselors</td>
<td>386 (95.5)</td>
<td>12 (3.0)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>School Nurses</td>
<td>365 (90.3)</td>
<td>32 (7.9)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>School Social Workers</td>
<td>334 (82.7)</td>
<td>28 (6.9)</td>
<td>8 (2.0)</td>
</tr>
<tr>
<td>School Resource Officers (police)</td>
<td>302 (74.8)</td>
<td>68 (16.8)</td>
<td>8 (2.0)</td>
</tr>
<tr>
<td>School Administrators</td>
<td>285 (70.5)</td>
<td>112 (27.7)</td>
<td>2 (0.5)</td>
</tr>
<tr>
<td>Health Teachers</td>
<td>250 (61.9)</td>
<td>131 (32.4)</td>
<td>11 (2.7)</td>
</tr>
<tr>
<td>Students (peers)</td>
<td>213 (52.7)</td>
<td>159 (39.4)</td>
<td>24 (5.9)</td>
</tr>
</tbody>
</table>

N=404
**Table 4.3: Stage of Change for Having a Response Protocol**

<table>
<thead>
<tr>
<th>Item</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRECONTEMPLATION:</strong> Our school personnel have never seriously thought about creating a protocol for responding to a dating violence incident.</td>
<td>234 (57.9)</td>
</tr>
<tr>
<td><strong>CONTEMPLATION:</strong> Our school personnel have been “talking” about creating a protocol for responding to a dating violence incident.</td>
<td>69 (17.1)</td>
</tr>
<tr>
<td><strong>PREPARATION:</strong> Our school personnel have formal plans to implement a protocol for dating violence incidents in the next school year.</td>
<td>18 (4.5)</td>
</tr>
<tr>
<td><strong>ACTION:</strong> Our school personnel started this school year following a protocol for dating violence incidents.</td>
<td>6 (1.5)</td>
</tr>
<tr>
<td><strong>MAINTENANCE:</strong> We have been following a response protocol for dating violence incidents for more than 1 school year.</td>
<td>49 (12.1)</td>
</tr>
</tbody>
</table>

N=404


School nurses were asked to report if their school had certain practices and policies for prevention of ADV (Table 4). About 1 in 5 (21.8%) nurses reported that their school’s violence prevention/Safe School policy addressed ADV, and less than 1 in 10 (7.4%) reported that the Safe School Policy had specified disciplinary action for ADV.
About 1 in 8 (12.9%) of the nurses reported that training to assist victims of ADV was provided to their school personnel in the past 2 years. A little less than a third (30.9%) of the nurses reported that their school keeps ADV complaints in a confidential file separate from academic records, and about one-fourth (28.5%) indicated that their school conducts periodic student surveys that include questions on ADV behaviors. Approximately one third (34.4%) of the school nurses agreed that their school has information posted about ADV that is easy for students to access.

The majority of the school nurses indicated that their school educates students about dating violence prevention (54.2%), healthy dating relationships (66.3%), and about where to report an incident of dating violence (50.5%). These three items were combined to compute the ADV prevention activities score. For each type of prevention activity offered by the school a score of 1 was given and lack of offering an activity resulted in a score of 0. The total prevention activity score had a range of 0-3 (31.7% scored a 0 and 44.6% scored a 3). The average score was 1.71 (SD=1.31) and the median score was 2. Those nurses who reported having a school protocol for responding to ADV incidents had a higher ADV prevention activity score (M=2.45, SD=1.03) as compared to nurses who do not have a school protocol for responding to ADV incidents (M=1.59, SD=1.31) [t=5.51, df=84.48, p<0.001].
<table>
<thead>
<tr>
<th>Item</th>
<th>YES N (%)</th>
<th>NO N (%)</th>
<th>NOT SURE N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our school’s violence prevention/Safe School policy addresses ADV.</td>
<td>88 (21.8)</td>
<td>156 (38.6)</td>
<td>160 (39.6)</td>
</tr>
<tr>
<td>If yes, is disciplinary action for adolescent dating violence specified in the policy?</td>
<td>30 (7.4)</td>
<td>192 (47.5)</td>
<td>182 (45.0)</td>
</tr>
<tr>
<td>In the past 2 years training to assist victims of ADV has been provided to our school personnel.</td>
<td>48 (11.9)</td>
<td>298 (73.8)</td>
<td>56 (13.9)</td>
</tr>
<tr>
<td>We have a school committee that meets periodically to address health and safety issues which include ADV.</td>
<td>75 (18.6)</td>
<td>262 (64.9)</td>
<td>62 (15.3)</td>
</tr>
<tr>
<td>Our school keeps ADV complaints in a confidential file separate from academic records.</td>
<td>125 (30.9)</td>
<td>87 (21.5)</td>
<td>186 (46.0)</td>
</tr>
<tr>
<td>Our school has information posted about ADV that is easy for students to find.</td>
<td>139 (34.4)</td>
<td>188 (46.5)</td>
<td>66 (16.3)</td>
</tr>
<tr>
<td>Our school conducts periodic student surveys that include questions on ADV behaviors.</td>
<td>115 (28.5)</td>
<td>181 (44.8)</td>
<td>104 (25.7)</td>
</tr>
<tr>
<td>Our school educates students about:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy dating relationships</td>
<td>268 (66.3)</td>
<td>58 (14.4)</td>
<td>73 (18.1)</td>
</tr>
<tr>
<td>Dating violence prevention</td>
<td>219 (54.2)</td>
<td>81 (20.0)</td>
<td>99 (24.5)</td>
</tr>
<tr>
<td>Where to report an incident of dating violence</td>
<td>204 (50.5)</td>
<td>74 (18.3)</td>
<td>120 (29.7)</td>
</tr>
</tbody>
</table>

N=404
4.7. School Nurses’ Assistance to Victims of ADV

Nurses were asked to report the number of victims of ADV assisted by them in the past 2 years and the gender of victims assisted by them. The majority of the school nurses (53.0%) had assisted victims of ADV in the past 2 years. Less than 1 in 10 (6.4%) high school nurses assisted a male victim of ADV, whereas more than half (52.5%) of the high school nurses assisted a female victim of ADV. The average number of victims assisted by school nurses was 1.86 (S.D=±3.88) and the median number of ADV victims assisted by the study population was 1.

Nurses were also asked to identify the type of assistance they provided to victims of ADV in the past 2 years. A plurality (43.1%) of nurses referred the victim to a school counselor. A little less than one fourth (24.0%) of the nurses called the parents/guardians of the victim to inform them of the problem or referred the student to legal authorities (24.5%). Almost 1 in 5 nurses provided primary care to the victim (20.5%) or referred the victim to a school social worker (20.8%).

Almost 1 in 10 (9.9%) of the nurses reported providing other types of assistance (e.g. provided advise/emotional support, referred the student to an assistant principal, basic counseling and answers to questions of females who become pregnant, provided information on what is an abusive relationship, mental health services and referral to community based organizations, one on one health teaching, recommended counseling then followed up with calls to encourage counseling, referred to domestic abuse shelter/resource center, etc).
### Table 4.5: Types of Assistance Provided to Victims of ADV by School Nurses

<table>
<thead>
<tr>
<th>Item</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred the victim to school counselor</td>
<td>174(43.1)</td>
</tr>
<tr>
<td>Referred student to legal authorities</td>
<td>99(24.5)</td>
</tr>
<tr>
<td>Called the parents/guardians of the victim to inform them</td>
<td>97(24.0)</td>
</tr>
<tr>
<td>Provided primary care</td>
<td>83(20.5)</td>
</tr>
<tr>
<td>Referred the victim to school social worker</td>
<td>84(20.8)</td>
</tr>
<tr>
<td>Referred the victim to a physician/ medical clinic</td>
<td>74(18.3)</td>
</tr>
<tr>
<td>Reported the incident to child protection agencies</td>
<td>65(16.1)</td>
</tr>
<tr>
<td>Helped the victim obtain protective orders</td>
<td>15 (3.7)</td>
</tr>
<tr>
<td>Reported the incident to teachers</td>
<td>14(3.5)</td>
</tr>
<tr>
<td>Other</td>
<td>40(9.9)</td>
</tr>
</tbody>
</table>

N=404
4.8. School Nurses’ Perceived Roles in Preventing and Responding to Adolescent Dating Violence

The study population was asked to rate their agreement with a series of statements on what should be the roles of school nurses in relation to preventing and responding to ADV. More than three fourths (>85%) of the nurses agreed with all the statements (Table 4-6). However, about 1 in 8 (12.9%) respondents did not agree that school nurses should assist the victims of dating violence by referring them to legal authorities. Additionally, more than 1 in 20 respondents did not agree that school nurses should work closely with school administrators to help formulate appropriate dating violence policies for students (6.4%) or school nurses should work closely with school personnel to help them be able to identify victims of adolescent dating violence (6.4%).

4.9. School Nurses’ Knowledge on Adolescent Dating Violence

A series of factual statements from peer reviewed scientific journals and government reports were used to assess the knowledge of high school nurses about ADV (Table 4-7). Of the 9 questions, 5 were answered correctly by more than half of the nurses. However, less than 1 in 4 knew that abuse in a dating relationship occurs more commonly in students from lower socioeconomic backgrounds compared to students from higher socioeconomic backgrounds (18.6%), adolescent dating violence occurs more frequently among racial and ethnic minorities as compared to whites (21.5%), and victims of dating violence typically talk about the abuse with their peers (22.3%).
Table 4.6: School Nurses’ Perceptions of Their Roles in Preventing and Responding to Adolescent Dating Violence

<table>
<thead>
<tr>
<th>Item</th>
<th>Strongly Agree/Agree</th>
<th>Strongly Disagree/Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>School nurses should be educated to assist students who are abused in a dating relationship.</td>
<td>403(99.8)</td>
<td>1(0.2)</td>
</tr>
<tr>
<td>Students who are abused in a dating relationship need to be encouraged to report the abuse to the school nurse.</td>
<td>401(99.3)</td>
<td>3(0.7)</td>
</tr>
<tr>
<td>It is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships.</td>
<td>401(99.3)</td>
<td>3(0.7)</td>
</tr>
<tr>
<td>School nurses should be involved in developing the protocols that focus on how to respond to adolescent dating violence incidents.</td>
<td>389(96.3)</td>
<td>15(3.7)</td>
</tr>
<tr>
<td>It is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students.</td>
<td>378(93.6)</td>
<td>26(6.4)</td>
</tr>
<tr>
<td>It is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.</td>
<td>378(93.6)</td>
<td>26(6.4)</td>
</tr>
<tr>
<td>It is the role of school nurses to work closely with other school personnel to improve their skills in assisting students who are victims of dating violence.</td>
<td>378(93.6)</td>
<td>26(6.4)</td>
</tr>
<tr>
<td>School nurses should assist the victims of dating violence by referring them to legal authorities.</td>
<td>352(87.1)</td>
<td>52(12.9)</td>
</tr>
</tbody>
</table>

N=404
Table 4.7: High School Nurses’ Knowledge about Adolescent Dating Violence

<table>
<thead>
<tr>
<th>Item (Correct Answer)</th>
<th>Answered Correctly N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patterns of dating violence behavior often start in early adolescence and carry through into adult relationships. (True)</td>
<td>399(98.8)</td>
</tr>
<tr>
<td>Dating abuse can lead to risky sexual behaviors that can result in unintended pregnancy, sexually-transmitted diseases, and HIV infections. (True)</td>
<td>386(95.5)</td>
</tr>
<tr>
<td>Children who have been abused are more likely to become perpetrators or victims of dating violence. (True)</td>
<td>385(95.3)</td>
</tr>
<tr>
<td>Less than 5% of high school students experience physical dating violence. (False)</td>
<td>278(68.8)</td>
</tr>
<tr>
<td>Girls who report physical or sexual dating abuse have higher rates of drug, alcohol, &amp; tobacco use than girls who report no abuse. (True)</td>
<td>208(51.5)</td>
</tr>
<tr>
<td>Victims of dating violence typically talk about the abuse with their peers. (True)</td>
<td>90(22.3)</td>
</tr>
<tr>
<td>Adolescent dating violence occurs more frequently among racial and ethnic minorities as compared to whites. (True)</td>
<td>87(21.5)</td>
</tr>
<tr>
<td>Abuse in a dating relationship occurs more commonly in students from a lower socioeconomic backgrounds compared to students from higher socioeconomic backgrounds. (True)</td>
<td>75(18.6)</td>
</tr>
<tr>
<td>Physical dating violence is more common against adolescent females than males. (False)</td>
<td>48(11.9)</td>
</tr>
</tbody>
</table>

N=404

A knowledge score was computed for the entire population of respondents. For each question answered correctly, the respondent received a score of 1 and for each question answered incorrectly the respondent received a score of 0. The possible range
for knowledge scores was 0-9. However, the maximum score obtained was 8. The average score for the population was 4.84 (S.D=±1.17) and the median score was 5.

4.10. Barriers to Assisting Victims of ADV

School nurses were asked to identify the barriers for assisting victims of ADV by selecting options from multiple choices. First, the school nurses had to identify barriers for themselves. Second, they were asked to identify the relevant barriers for schools assisting victims of ADV. The majority (54.0 %) of school nurses reported that they do not have the training to help victims of ADV. Additionally, a little more than one fourth (25.2%) admitted that they did not have the private space needed to help victims of ADV or they did not have the time to help victims of ADV.

In relation to barriers for schools, more than half (55.6%) of the school nurses reported that personnel in their school did not have the training to help victims of ADV. Also, about 1 in 5 nurses (20.3%) reported that their school did not have enough personnel to help victims of ADV or that ADV is a minor issue compared to other student health issues with which the school deals (23.0%) or the school administration did not want to deal with this sensitive issue (19.1%).
### Table 4.8: Perceived Barriers to Assisting Victims of Adolescent Dating Violence

<table>
<thead>
<tr>
<th>Barriers for Nurses</th>
<th>Agreement N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not have the training to help victims of ADV.</td>
<td>218(54.0)</td>
</tr>
<tr>
<td>ADV is a minor issue compared to other student health issues with which I deal.</td>
<td>104(25.7)</td>
</tr>
<tr>
<td>I do not have the private space needed to help victims of ADV.</td>
<td>102(25.2)</td>
</tr>
<tr>
<td>I do not have the time to help victims of ADV.</td>
<td>102(25.2)</td>
</tr>
<tr>
<td>Parents will not approve of my involvement in helping victims of ADV.</td>
<td>45(11.1)</td>
</tr>
<tr>
<td>It is not my responsibility to help victims of ADV.</td>
<td>20(5)</td>
</tr>
<tr>
<td>Other</td>
<td>66(16.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers for Schools</th>
<th>Agreement N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel in our school do not have the training to help victims of ADV.</td>
<td>225(55.6)</td>
</tr>
<tr>
<td>ADV is a minor issue compared to other student health issues with which the school deals.</td>
<td>93(23.0)</td>
</tr>
<tr>
<td>Our school does not have enough personnel to help victims of ADV.</td>
<td>82(20.3)</td>
</tr>
<tr>
<td>The school administration does not want to deal with this sensitive issue.</td>
<td>77(19.1)</td>
</tr>
<tr>
<td>Personnel in our school do not have the time to help victims of ADV.</td>
<td>67(16.6)</td>
</tr>
<tr>
<td>Parents will not approve of school’s involvement in helping victims of ADV</td>
<td>61(15.1)</td>
</tr>
<tr>
<td>It is not the school’s responsibility to help victims of ADV.</td>
<td>26(6.4)</td>
</tr>
<tr>
<td>Other</td>
<td>30 (7.4)</td>
</tr>
</tbody>
</table>

*N=404*
A barrier score was computed for the responding nurses after combining all the barriers. For each barrier reported by the nurses a score of 1 was given. The potential range for the barrier scores was 0-6. The average barrier score for the nurses was 1.46 (S.D.=±1.16) and the median number of barriers perceived by the nurses was 1. Those nurses who reported having a school protocol for responding to ADV incidents had a lower barrier score (M=1.14, SD=1.50) compared to nurses who did not have a school protocol for responding to ADV incidents (M=1.51, SD=1.09) [t=-2.24, df=402, p=0.02].

4.11. Selected Predictors of Assisting Victims of ADV

School nurses were asked to report the number of ADV victims assisted by them in the past 2 years. Based on the number of ADV victims assisted in the past 2 years, the school nurses were grouped into 2 categories (did not assist victims of ADV and assisted 1 or more victims of ADV). This variable was treated as a dependent variable to compute the odds of assisting ADV victims based on selected independent variables (Table 4-9).

Duration of nurse’s employment, number of schools served by the school nurse, perceived extent of ADV in the nurse’s school, having a school protocol for responding to ADV incidents, having formal training on ADV, having a school committee that meets periodically to address health and safety issues, and perceiving barriers to assisting victims of ADV were predictive of whether a school nurse assisted victims of ADV.
<table>
<thead>
<tr>
<th>Predictors</th>
<th>OR (95% CI)</th>
<th>AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Schools Served</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 school</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>More than 1 school</td>
<td>0.58 (0.39-0.86)</td>
<td>0.52 (0.32-0.82)</td>
</tr>
<tr>
<td>Certification Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>2.03 (1.32-3.11)</td>
<td>1.76 (1.07-2.90)</td>
</tr>
<tr>
<td>Perceived extent of ADV in school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (&lt;3)</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>High (≥3)</td>
<td>2.38 (1.59-3.57)</td>
<td>3.00 (1.86-4.84)</td>
</tr>
<tr>
<td>Duration of Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤12 years</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>&gt; 12 years</td>
<td>1.57 (1.06-2.33)</td>
<td>1.13 (0.71-1.82)</td>
</tr>
<tr>
<td>School Protocol for responding to ADV incidents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>2.19 (1.19-4.04)</td>
<td>0.88 (0.39-1.98)</td>
</tr>
<tr>
<td>Formal training on ADV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>2.97 (1.88-4.70)</td>
<td>1.75 (0.99-3.11)</td>
</tr>
<tr>
<td>Barriers to Assisting Victims</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No barriers</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>≥ 1 Barrier(s)</td>
<td>0.58 (0.36-0.94)</td>
<td>1.16 (0.64-2.09)</td>
</tr>
<tr>
<td>Our school’s violence prevention/Safe School policy addresses ADV:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/ Not sure</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>2.40 (1.45-3.98)</td>
<td>1.49 (0.75-2.91)</td>
</tr>
<tr>
<td>In the past 2 years training to assist victims of ADV has been provided to our school personnel?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/ Not sure</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>3.00 (1.51-5.95)</td>
<td>1.52 (0.67-3.52)</td>
</tr>
<tr>
<td>We have a school committee that meets periodically to address health and safety issues which include ADV.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/ Not sure</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>Yes</td>
<td>1.74(1.04-2.93)</td>
<td>0.75 (0.38-1.49)</td>
</tr>
</tbody>
</table>
School nurses who perceived a greater extent of ADV in their schools were 3 times more likely to report that they assisted victims of ADV compared to nurses who perceived a lesser extent of ADV in their schools. Also, the school nurses who were certified were almost two times more likely to report that they assisted victims of ADV in the past 2 years compared to the nurses who were not certified by state or national agencies. However, the nurses who served more than 1 school were half as likely to
report that they assisted victims of ADV in the past 2 years as opposed to the school nurses who served only 1 school.

4.12. Testing of Hypotheses

**Research Question 1 - What is the school nurse’s perceived extent of ADV in their school?**

1.1. The perceived extent of ADV in their school does not differ significantly based on the race/ethnicity of the school nurse.

An independent samples t-test was computed to assess the difference in the perceived extent of ADV between white and non-white nurses. White nurses perceived a similar level of ADV (M=2.65, SD=±0.91) as compared to non-white nurses (M=2.62, SD=±0.87) and this was not statistically significantly different (t=0.17, df =402, p=0.85). This null hypothesis was accepted.

1.2. The perceived extent of ADV in their school does not differ significantly based on the age of the school nurse.

An independent samples t-test was computed to assess the difference in the perceived extent of ADV between the nurses of 2 age groups (<50 years of age versus ≥50 years of age). The nurses in the younger age group perceived a similar extent of ADV (M=2.55, SD=±0.93) as compared to the nurses in the older age group (M=2.68, SD=±0.90) and this was not statistically significantly different (t=-1.25, df =402, p=0.20). This null hypothesis was accepted.

1.3. The perceived extent of ADV in their school does not differ significantly based on the duration of employment as a school nurse.
An independent samples t-test was computed to assess the difference in the
perceived extent of ADV between the nurses in the 2 durations of employment
groups (≤12 years and >12 years of employment). The nurses employed for a lesser
duration perceived a similar extent of ADV (M=2.62, SD=±0.95) as compared to
nurses employed for a longer duration (M=2.68, SD=±0.87) and this was not
statistically significantly different (t=-0.64, df=401, p=0.52). This null hypothesis
was accepted.

1.4. The perceived extent of ADV in their school does not differ significantly based
on the certification status of the school nurse.

An independent samples t-test was computed to assess the differences in the
perceived extent of ADV based on the certification status of nurses. The nurses who
were certified perceived a higher extent of ADV (M=2.74, SD=±0.88) when
compared to nurses who were not certified (M=2.47, SD=±0.95) and this was
statistically significantly different (t=2.71, df=402, p=0.007). Therefore, this null
hypothesis was rejected.

1.5. The perceived extent of ADV in their school does not differ significantly based
on the employment status of the school nurse (full time versus part time).

An independent samples t-test was computed to assess the differences in the
perceived extent of ADV based on the employment status of nurses. The nurses
who were employed full time perceived a similar extent of ADV (M=2.67,
SD=±0.90) when compared to nurses who were employed part-time (M=2.48,
SD=±0.99 and this was not statistically significantly different (t=1.31, df=401,
p=0.18). This null hypothesis was accepted.
1.6. **The perceived extent of ADV in their school does not differ significantly based on the location of the school of the school nurse (urban vs. rural vs. suburban).**

A one way ANOVA was conducted to assess the differences in the perceived extent of ADV based on the geographical location of practice for the nurses (urban/suburban/rural). There was a statistically significant difference (F=4.96, df=2, p=0.007) in the perceived extent of ADV between urban (M=2.92, SD=±0.85), suburban (M=2.55, SD=±0.91), and rural (M=2.62, SD=±0.92) locations of practice. Therefore, the null hypothesis was rejected.

A Tukey’s HSD post hoc analysis was conducted to assess differences in the perceived extent of ADV between the three groups. The difference between urban and suburban groups was found to be statistically significant (p=0.006), whereas no statistically significant differences were found between rural and urban (p=0.057) or rural and suburban high school nurses (p=0.778).

1.7. **The perceived extent of ADV in their school does not differ significantly based on the highest level of education of the school nurse.**

An independent samples t-test was computed to assess the difference in the perceived extent of ADV between the nurses based on their highest level of education (≤bachelors degree versus >bachelors degree). The nurses with a bachelors degree or less than a bachelors degree perceived a similar level of ADV (M=2.59, SD=±0.92) as compared to the nurses with a masters degree or higher (M=2.73, SD=±0.89) and this was not statistically significantly different (t=−1.56, df=402, p=0.12). This null hypothesis was accepted.
1.8. **The perceived extent of ADV in their school does not differ significantly based on the number of schools served by the school nurse.**

An independent samples t-test was computed to assess the difference in the perceived extent of ADV between the nurses who served 1 school as opposed to nurses who served more than 1 school. The nurses who served only 1 school perceived there to be a similar amount of ADV (M=2.62, SD=±0.93) when compared to nurses who reported serving more than 1 school (M=2.68, SD=±0.90) and this was not statistically significantly different (t = -0.64, df =398, p=0.52). This null hypothesis was **accepted**.

1.9. **The perceived extent of ADV in their school does not differ significantly based on whether the school nurse received any training on dating violence.**

An independent samples t-test was computed to assess the difference in the perceived extent of ADV based on whether the school nurse received formal training on ADV related issues. The nurses who received training on ADV related issues perceived a similar level of ADV (M=2.76, SD=±0.93) when compared to nurses who did not have formal training on ADV (M=2.60, SD=±0.89) and this was not statistically significantly different (t=1.60, df =402, p=0.10). This null hypothesis was **accepted**.

1.10. **There is no difference between the extent of ADV in US schools as compared to the responding nurse’s schools.**

The average perceived extent of ADV in US schools was computed for the entire population of responding nurses (M=3.35, SD=±0.71). A one sample t-test was used to assess the difference between the perceived extent of ADV in US schools
compared to the perceived extent in the nurse’s schools. Responding nurses perceived a similar level of ADV problems at their schools (M=2.69, SD=±0.91) and this was statistically significantly different (t=-15.24, df=403, p<0.001). Therefore, this null hypothesis was rejected.

Research Question 2- What ADV prevention activities are currently being used in nurse’s schools?

2.1. ADV prevention activities in schools do not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.

An independent samples t-test was computed to assess the difference in the ADV prevention activities score based on the school nurse’s perceived extent of ADV in their schools. The nurses who perceived fewer ADV problems in their schools reported a similar number of ADV prevention activities (M=1.78, SD=±1.30) when compared to nurses who perceived more ADV problems in their schools (M=1.65, SD=±1.35). However, this was not statistically significantly different (t=0.97, df =402, p=0.33). This null hypothesis was accepted.

2.2. ADV prevention activities in schools do not differ significantly based on the race/ethnicity of the responding school nurses.

An independent samples t-test was computed to assess the difference in the ADV prevention activities scores based on the race/ethnicity of the school nurse. The number of ADV prevention activities reported by white nurses (M=1.71, SD=1.31) was similar to the number of ADV prevention activities reported by non-white
nurses (M=1.70, SD=1.42) and this was not statistically significantly different (t=0.08, df =402, p=0.99). Therefore, this null hypothesis was **accepted**.

2.3. **ADV prevention activities in schools do not differ significantly based on the age of the school nurse.**

An independent samples t-test was computed to assess the difference in the reported number of ADV prevention activities by age of the nurses (<50 years of age versus ≥50 years of age). The nurses in the younger age group reported a similar number of ADV prevention activities (M=1.60, SD=±1.33) when compared to nurses in the older age group (M=1.74, SD=±1.31) and this was not statistically significantly different (t= -0.93, df =402, p=0.35). This null hypothesis was **accepted**.

2.4. **ADV prevention activities in schools do not differ significantly based on the duration of employment as a school nurse.**

An independent samples t-test was computed to assess the difference in the reported number of ADV prevention activities between the nurses in the 2 durations of employment (≤12 years versus >12 years of employment). The nurses employed for a lesser duration reported fewer number of ADV prevention activities (M=1.55, SD=±1.33) when compared to the nurses employed for a longer duration (M=1.86, SD=±1.28). This difference was statistically significantly different (t=-2.37,df =401, p=0.01). Therefore, this null hypothesis was **rejected**.

2.5. **ADV prevention activities in schools do not differ significantly based on the certification status of the school nurse.**

An independent samples t-test was computed to assess the differences in the reported number of ADV prevention activities based on the certification status of
nurses. The nurses who were certified reported similar ADV prevention activities (M=1.80, SD=±1.30) compared to the nurses who were not certified (M=1.52, SD=±1.32) and this was not statistically significantly different (t=1.97, df =402, p=0.04). Therefore, this null hypothesis was accepted.

2.6. ADV prevention activities in schools do not differ significantly based on the employment status of the school nurse (full time vs. part time).

An independent samples t-test was computed to assess the differences in the reported number of ADV prevention activities based on the employment status of nurses. The nurses who were employed full time reported a similar number of ADV prevention activities (M=1.72, SD=±1.31) when compared to nurses who were employed part-time (M=1.58, SD=±1.30) and this was not statistically significantly different (t=0.657, df =401, p=0.51). This null hypothesis was accepted.

2.7. ADV prevention activities in schools do not differ significantly based on the location of the school of the responding school nurse (urban vs. rural vs. suburban).

A one way ANOVA was conducted to assess the differences in the reported number of ADV prevention activities based on the geographical location of practice of the nurses (urban/ suburban/rural). There was no statistically significant difference (F=2.64, df=2, p=0.07) in the reported number of ADV prevention activities among schools located in urban (M=1.63, SD=±1.31), suburban (M=1.86, SD=±1.27), and rural (M=1.52, SD=±1.36) areas. Therefore, the null null hypothesis was accepted.

2.8. ADV prevention activities in schools do not differ significantly based on the highest level of education of the school nurse.
An independent samples t-test was computed to assess the difference in the reported number of ADV prevention activities between the nurses based on their highest level of education (≤bachelors degree versus >bachelors degree). The nurses with a bachelors degree or less than a bachelors degree reported a similar number of ADV prevention activities (M=1.65, SD=±1.31) when compared to nurses with a masters degree or higher (M=1.78, SD=±1.32). This difference was not statistically significantly different (t=-1.03, df =402, p=0.30). This null hypothesis was accepted.

2.9. ADV prevention activities in schools do not differ significantly based on the number of schools served by the school nurse.

An independent samples t-test was computed to assess the difference in the reported number of ADV prevention activities between the nurses who served 1 school as opposed to nurses who served more than 1 school. The nurses who served only 1 school reported a similar number of ADV prevention activities (M=1.80, SD=±1.32) when compared to nurses who reported serving more than 1 school (M=1.60, SD=±1.30) and this was not statistically significantly different (t = 1.495, df=398, p=0.13. This null hypothesis was accepted.

2.10. ADV prevention activities in schools do not differ significantly based on whether the school nurse received any training on dating violence.

An independent samples t-test was computed to assess the difference in the reported number of ADV prevention activities based on whether the school nurse received formal training on ADV related issues. The nurses who received training on ADV related issues reported more number of ADV prevention activities (M=2.34,
Research Question 3- What is the number of ADV victims who received assistance from a school nurse in the past 2 years?

3.1. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.

An independent samples t-test was computed to assess the differences in the number of ADV victims assisted by school nurses based on their perceived extent of ADV in their school (low versus high). The nurses who perceived fewer ADV problems had assisted fewer numbers of ADV victims (M=1.02, SD=±1.70) when compared to nurses who perceived more ADV problems in their school (M=2.45, SD=±4.79), and this difference was statistically significantly different (t=-3.69, df =402, p=0.001). This null hypothesis was rejected.

3.2. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the race/ethnicity of the responding school nurses.

An independent samples t-test was computed to assess the differences in the number of ADV victims assisted by school nurses based on their racial/ethnic background (white versus non-white). White nurses assisted a similar number of ADV victims (M=1.84, SD=±3.92) compared to minority nurses (M=2.04,
SD=±3.29), and this difference was not statistically significant different (t=-0.237, df =402, p=0.81). This null hypothesis was accepted.

3.3. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the age of the school nurse.

An independent samples t-test was computed to assess the difference in the number of ADV victims who received assistance from school nurses in the past 2 years based on the nurses age(<50 years of age versus ≥50 years of age). Younger nurses reported assisting a similar number of victims (M=1.58, SD=±2.29) compared to older nurses (M=1.94, SD=±4.27). This difference was not statistically significantly different (t=-0.81, df =402, p=0.41). This null hypothesis was accepted.

3.4. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the duration of employment as a school nurse.

An independent samples t-test was computed to assess the difference in the number of ADV victims who received assistance from school nurses in the past 2 years based on the nurses duration of employment(≤12 years versus >12 years of employment). The nurses employed for a lesser duration reported assisting fewer ADV victims (M=1.44, SD=±2.30) compared to nurses employed for a longer duration (M=2.29, SD=±4.98) and this difference was not statistically significantly different (t=-2.21,df =401, p=0.02). This null hypothesis was accepted.

3.5. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the certification status of the school nurse.
An independent samples t-test was computed to assess the differences in the
number of ADV victims who received assistance from school nurses in the past 2
years based on the certification status of nurses. The nurses who were certified
reported assisting a similar number of ADV victims (M=2.04, SD=±4.38) as nurses
who were not certified (M=1.44, SD=±2.44) and this difference was not statistically
significantly different (t=1.437, df=402, p=0.151). Therefore, this null hypothesis
was accepted.

3.6. The number of ADV victims who received assistance from school nurses in the
past 2 years does not differ significantly based on the employment status of the
school nurses (full time vs. part time).

An independent samples t-test was computed to assess the differences in the
number of ADV victims who
received assistance from school nurses in the past 2 years based on the employment
status of the nurses (full time versus part time). The nurses who were employed full
time reported assisting a similar number of ADV victims (M=1.90, SD=±3.99) as
nurses who were employed part-time (M=1.56, SD=±3.00) and this difference was
not statistically significantly different (t=0.552, df=401, p=0.58). This null
hypothesis was accepted.

3.7. The number of ADV victims who received assistance from school nurses in the
past 2 years does not differ significantly based on the location of the school of
the responding school nurse (Urban vs. Rural vs. Suburban).

A one way ANOVA was conducted to assess the differences in the number of ADV
victims who received assistance from school nurses in the past 2 years based on the
geographical location of practice for the nurses (urban versus suburban versus rural). There was not a statistically significant difference ($F=3.826$, $df=2$, $p=0.02$) in the number of ADV victims who received assistance from school nurses between urban ($M=2.88$, $SD=6.85$), suburban ($M=1.62$, $SD=2.57$), and rural ($M=1.52$, $SD=2.41$) locations of practice. Therefore, this null hypothesis was accepted.

3.8. **The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the highest level of education of the school nurses.**

An independent samples t-test was computed to assess the difference in the number of ADV victims who received assistance from school nurses in the past 2 years based on their highest level of education ($\leq$bachelors degree versus $>$bachelors degree). The nurses with a bachelors degree or less than a bachelors degree reported assisting fewer ADV victims ($M=1.49$, $SD=\pm2.26$) compared to nurses with a masters degree or higher ($M=2.36$, $SD=\pm5.32$) and this difference was not statistically significantly different ($t=-2.215$, $df=402$, $p=0.02$). This null hypothesis was accepted.

3.9. **The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on whether the school nurse received any training on ADV.**

An independent samples t-test was computed to assess the difference in the number of ADV victims who received assistance from school nurses in the past 2 years based on whether the school nurse received formal training on ADV related issues. The nurses who received training on ADV related issues reported assisting more
ADV victims (M=2.70, SD=±3.36) in the past 2 years compared to nurses who did not have formal training on ADV related issues (M=1.49, SD=±4.04), and this difference was statistically significantly different (t=2.87, df=402, p=0.004). This null hypothesis was rejected.

**Research Question 4- Based on Stages of Change theory what are the current practices of nurse’s school in relation to having a protocol for dealing with an ADV incident?**

4.1. **The current practices of schools in relation to having a protocol for dealing with an ADV incident do not differ significantly based on the nurse’s perceived extent of ADV problem in their schools.**

A Pearson’s chi-square test was computed to assess group differences between nurses in schools that had an ADV response protocol based on the perceived extent of ADV in their school (low versus high). Based on the perceived extent of ADV in their schools there were no statistically significant differences between groups of nurses in relation to having or not having an ADV response protocol ($\chi^2 = 0.393$, df=1, p=0.53). This null hypothesis was accepted.

4.2. **The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the race/ethnicity of the school nurse.**

A Pearson’s chi-square test was computed to assess group differences between nurses for having an ADV response protocol based on the race/ethnicity of the school nurse (white versus non-white). Based on the nurses race/ethnicity there
were no statistically significant differences between groups of nurses in schools that had ADV response protocols and schools nurses in schools without such protocols ($\chi^2 = 2.84$, df=1, p=0.09). This null hypothesis was accepted.

4.3. **The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the age of the school nurse.**

A Pearson’s chi-square test was computed to assess group differences between nurses for having an ADV response protocol based on the nurses age (<50 years of age versus ≥50 years of age). Based on the nurses age there were no statistically significant differences between groups of nurses in schools that had ADV response protocols and school nurses in schools without such protocols ($\chi^2 = 0.206$, df=1, p=0.65). This null hypothesis was accepted.

4.4. **The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the duration of employment as a school nurse.**

A Pearson’s chi-square test was computed to assess group differences between nurses for having an ADV response protocol based on the nurses duration of employment (≤12 years versus >12 years of employment). Based on the nurses duration of employment there was not a statistically significant difference between nurses in schools that had ADV response protocols and schools nurses in schools without such protocols ($\chi^2 = 0.680$, df=1, p=0.41). This null hypothesis was accepted.
4.5. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the certification status of the school nurse.

A Pearson’s chi-square test was computed to assess group differences between nurses for having an ADV response protocol based on the certification status of nurses. Based on certification status there was no statistically significant differences between groups of nurses in schools that had ADV response protocols and schools nurses in schools without such protocols ($\chi^2 = 1.057$, df=1, p=0.304). This null hypothesis was accepted.

4.6. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the employment status of the school nurse (full time vs. part time).

A Pearson’s chi-square test was computed to assess group differences between nurses who had and those who did not have an ADV response protocol based on the employment status of nurses. Based on the employment status there was no statistically significant difference between nurses in schools that had ADV response protocols and nurses in schools without such protocols ($\chi^2 = 0.332$, df=1, p=0.56). This null hypothesis was accepted.

4.7. The current practices of the schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the location of the school of the school nurse (Urban vs. Rural vs. Suburban).

A Pearson’s chi-square test was computed to assess group differences between nurses who had and those who did not have an ADV response protocol and their
location of practice. Based on the location of practice there were no statistically significant differences between groups of nurses in schools that had ADV response protocols and schools nurses in schools without such protocols ($\chi^2 = 2.580$, df=2, p=0.27). This null hypothesis was accepted.

4.8. **The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the highest level of education of the school nurse.**

A Pearson’s chi-square test was computed to assess group differences between nurses who had and those who did not have an ADV response protocol in their schools based on their highest level of education ($\leq$bachelors degree and $>$bachelors degree). Based on the highest level of educational attainment there was no statistically significant difference between groups of nurses in schools that had ADV response protocols and schools nurses in schools without such protocols ($\chi^2 = 0.045$, df=1, p=0.83). This null hypothesis was accepted.

4.9. **The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on whether the school nurse received any training on ADV.**

A Pearson’s chi-square test was computed to assess group differences among nurses who had and those who did not have an ADV response protocol in their schools and whether they received formal training on ADV related issues (yes versus no). There was a statistically significant difference between groups of nurses who had ADV response protocols in their schools as opposed to nurses who did not have protocol for responding to ADV incidents ($\chi^2 = 15.74$, df=1, p<0.001). Those nurses who had
received formal training on ADV related issues were significantly more likely to report that they had a school protocol (24.0%) for responding to ADV incidents as compared to those nurses who had not had formal training on ADV related issues (9.0%). Therefore, this null hypothesis was rejected.

Research Question 5- What are school nurses’ perceptions of the roles of various school personnel with regards to assisting student victims of ADV?

5.1. The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the perceived extent of ADV problems (high versus low) in their schools.

5.1.1. Health Teachers- Based on the perceived extent of ADV (high versus low) in their schools group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.379$, df=1, p=0.53).

5.1.2. School Administrators- Based on the perceived extent of ADV problem (high versus low) in schools group differences were assessed in nurses’ perceptions of the role of schools administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.01$, df=1, p=0.91).
5.1.3. **School Social Workers**- Based on the perceived extent of ADV problem (high versus low) in schools group differences were assessed in nurses’ perceptions of the roles of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.72$, df=1, $p=0.19$).

5.1.4. **School Resource Officers**- Based on the perceived extent of ADV problem (high versus low) in schools group differences were assessed in nurses’ perceptions of the roles of school resource officers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.69$, df=1, $p=0.40$).

This null hypothesis was accepted.

5.2. **The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the race/ethnicity (whites versus non-whites) of the school nurse.**

5.2.1. **Health Teachers**- Based on the racial/ethnic background (whites vs. non-whites) of the school nurses, group differences were assessed in nurses’ perceptions of the roles of health teachers in assisting victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.13$, df=1, $p=0.71$).
5.2.2. School Administrators- Based on the racial/ethnic background (whites vs. non-whites) of the school nurses, differences were assessed in nurses’ perceptions of the roles of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.91$, df=1, p=0.33).

5.2.3. School Social Workers- Based on the racial/ethnic background (whites vs. non-whites) of school nurse group differences were assessed in nurses’ perceptions of the roles of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.44$, df=1, p=0.23).

5.2.4. School Resource Officers- Based on the racial/ethnic background (whites vs. non-whites) of school nurse group differences were assessed in nurses’ perceptions of the roles of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 2.19$, df=1, p=0.12).

Thus, this null hypothesis was accepted.

5.3. The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the age (<50 years versus ≥ 50 years) of the school nurse.
5.3.1. **Health Teachers**- Based on the age of school nurse (<50 years versus ≥ 50 years) group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.81$, df=1, p=0.17).

5.3.2. **School Administrators**- Based on the age of school nurse (<50 years versus ≥ 50 years) group differences were assessed in nurses’ perceptions of the role of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 2.43$, df=1, p=0.11).

5.3.3. **School Social Workers**- Based on the age of school nurse (<50 years versus ≥ 50 years) group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.36$, df=1, p=0.54).

5.3.4. **School Resource Officers**- Based on the age of school nurse (<50 years versus ≥ 50 years) group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.60$, df=1, p=0.20).
Thus, this null hypothesis was accepted.

5.4. The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the duration of employment (≤12 years versus >12 years) as a school nurse.

5.4.1. Health Teachers- Based on the nurses’ duration of employment (≤12 years versus >12 years) group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.27$, df=1, $p=0.60$).

5.4.2. School Administrators- Based on the nurses’ duration of employment (≤12 years versus >12 years) group differences were assessed in nurses’ perceptions of the role of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 3.28$, df=1, $p=0.07$).

5.4.3. School Social Workers- Based on the nurses’ duration of employment (≤12 years versus >12 years) group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.41$, df=1, $p=0.52$).
5.4.4. **School Resource Officers** - Based on the nurses’ duration of employment (≤12 years versus >12 years) group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.07$, df=1, $p=0.93$).

Thus, this null hypothesis was **accepted**.

5.5. **The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the certification status (yes versus no) of the school nurse.**

5.5.1. **Health Teachers** - Based on the nurses’ certification status (yes versus no) group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.25$, df=1, $p=0.31$).

5.5.2. **School Administrators** - Based on the nurses’ certification status (yes versus no) group differences were assessed in nurses’ perceptions of the role of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.32$, df=1, $p=0.57$).

5.5.3. **School Social Workers** - Based on the nurses’ certification status (yes versus no) group differences were assessed in nurses’ perceptions of the role of school
social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.07$, df=1, $p=0.77$).

5.5.4. **School Resource Officers**- Based on the nurses’ certification status (yes versus no) group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.94$, df=1, $p=0.33$).

Thus, this null hypothesis was **accepted**.

5.6. **The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the employment status of the school nurse (full time vs. part time).**

5.6.1. **Health Teachers**- Based on the nurses’ employment status group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 2.07$, df=1, $p=0.15$).

5.6.2. **School Administrators**- Based on the nurses’ employment status group differences were assessed in nurses’ perceptions of the role of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.24$, df=1, $p=0.61$).
5.6.3. **School Social Workers**- Based on the nurses’ employment status group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. Due to data constraints a valid Pearson’s chi square test could not be computed for this null hypothesis. One of the cells in the crosstab computation had less than the minimum(n=5) number of study participants.

5.6.4. **School Resource Officers**- Based on the nurses’ employment status group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups \(\chi^2=2.50, df=1, p=0.11\).

Thus, this null hypothesis was accepted.

5.7. The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the location of the school (urban versus suburban versus rural) of the school nurse.

5.7.1. **Health Teachers**- Based on the nurses’ location of practice group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups \(\chi^2=0.22, df=2, p=0.89\).

5.7.2. **School Administrators**- Based on the nurses’ location of practice group differences were assessed in nurses’ perceptions of the role of school administrators
in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 1.66$, df=2, $p=0.43$).

5.7.3. **School Social Workers** - Based on the nurses’ location of practice group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.52$, df=2, $p=0.77$).

5.7.4. **School Resource Officers** - Based on the nurses’ location of practice group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.51$, df=2, $p=0.72$).

Thus, this null hypothesis was **accepted**.

5.8. **The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on the highest level of education of the school nurse ($\leq$ bachelors degree versus $>$ bachelors degree).**

5.8.1. **Health Teachers** - Based on the nurses’ level of education group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2 = 0.75$, df=1, $p=0.38$).
5.8.2. **School Administrators**- Based on the nurses’ level of education group differences were assessed in nurses’ perceptions of the role of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=0.01, \text{df}=1, p=0.88$).

5.8.3. **School Social Workers**- Based on the nurses’ level of education group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=0.39, \text{df}=1, p=0.52$).

5.8.4. **School Resource Officers**- Based on the nurses’ level of education group differences were assessed in nurses’ perceptions of the roles of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=2.76, \text{df}=1, p=0.09$).

Thus, this null hypothesis was **accepted**.

5.9. The school nurses’ perceptions of the roles of various school personnel (major role versus no role or minor role) with regards to assisting student victims of ADV do not differ significantly based on whether the school nurse received formal training on ADV (yes versus no)

5.9.1. **Health Teachers**- Based on whether the school nurse received formal training on ADV related issues group differences were assessed in nurses’ perceptions of the role of health teachers in assisting student victims of ADV. A Pearson’s chi-square
test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=2.53$, df=1, p=0.11).

5.9.2. School Administrators- Based on whether the school nurse received formal training on ADV related issues group differences were assessed in nurses’ perceptions of the roles of school administrators in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=0.07$, df=1, p=0.93).

5.9.3. School Social Workers- Based on whether the school nurse received formal training on ADV related issues group differences were assessed in nurses’ perceptions of the role of school social workers in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=2.08$, df=1, p=0.14).

5.9.4. School Resource Officers- Based on whether the school nurse received formal training on ADV related issues group differences were assessed in nurses’ perceptions of the role of school resource officer in assisting student victims of ADV. A Pearson’s chi-square test was computed to assess whether a significant group difference existed. There was no statistically significant difference between the groups ($\chi^2=2.60$, df=1, p=0.10).

Thus, this null hypothesis was accepted.
Research Question 6- What are school nurses’ perceived barriers to assisting student victims of ADV in their school?

6.1. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the perceived extent of ADV problems in their schools.

An independent samples t-test was computed to assess the difference in number of perceived barriers to assisting victims of ADV based on the perceived extent of ADV problem (low versus high). The nurses who perceived a lower extent of ADV problem perceived a similar number of barriers (M=1.54, SD=±1.19) as compared to those nurses who perceived fewer ADV problems (M=1.41, SD=±1.13), and this difference was not statistically significantly different (t=1.078, df =402, p=0.28). This null hypothesis was accepted.

6.2. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the race/ethnicity of the school nurse.

An independent samples t-test was computed to assess the difference in number of perceived barriers to assisting ADV victims based on the racial/ethnic background (white versus non-white) of nurses. Whites nurses reported a similar number of barriers (M=1.48, SD=±1.15) as minority nurses (M=1.12, SD=±1.26), and this was not statistically significant different (t=1.492, df =402, p=0.13). This null hypothesis was accepted.
6.3. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the age of the school nurse. 

An independent samples t-test was computed to assess the difference in number of perceived barriers to assisting victims of ADV based on the nurses age (<50 years of age versus ≥50 years of age). Younger nurses reported a similar number of perceived barriers (M=1.60, SD=±1.13) as nurses in the older age group (M=1.42, SD=±1.16). This difference was not statistically significantly different (t=1.31, df =402, p=0.18). This null hypothesis was accepted.

6.4. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the duration of employment as a school nurse. 

An independent samples t-test was computed to assess the difference in number of barriers to assisting ADV victims based on the nurses duration of employment (≤12 years versus >12 years of employment). The nurses employed for fewer years reported a higher number of barriers to assisting ADV victims (M=1.63, SD=±1.18) as compared to the nurses employed for a longer duration (M=1.29, SD=±1.11) and this was statistically significantly different (t=3.021,df =401, p=0.003). This null hypothesis was rejected.

6.5. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the certification status of the school nurse.
An independent samples t-test was computed to assess the differences in number of perceived barriers to assisting ADV victims based on the certification status of nurses. Nurses who were certified reported a similar number of barriers to assisting ADV victims (M=1.42, SD=±1.15) as nurses who were not certified (M=1.56, SD=±1.17). This difference was not statistically significantly different (t=-1.068, df=402, p=0.29). Therefore, this null hypothesis was accepted.

6.6. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the employment status of the school nurse (full time versus part time).

An independent samples t-test was computed to assess the differences in number of perceived barriers to assisting ADV victims based on the employment status of the nurses (full time versus part time). The nurses who were employed full time reported a similar number of perceived barriers to assisting ADV victims (M=1.48, SD=±1.16) as nurses who were employed part-time (M=1.34, SD=±1.13), and this was not statistically significantly different (t=0.743, df=402, p=0.45). This null hypothesis was accepted.

6.7. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the location of the school of the school nurse.

A one way ANOVA was conducted to assess the differences in number of perceived barriers to assisting ADV victims based on the geographical location of practice for the nurses (urban/suburban/rural). There was no statistically significant difference (F=0.880, df=2, p=0.41) in the number of perceived barriers to assisting
ADV victims between nurses practicing in urban (M=1.33, SD=1.13), suburban (M=1.48, SD=1.19), and rural (M=1.55, SD=1.13) locations. Therefore, this null hypothesis was accepted.

6.8. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the highest level of education of the school nurse.

An independent samples t-test was computed to assess the difference in the number of perceived barriers to assisting ADV victims based on the school nurses’ highest level of education (≤bachelors degree versus >bachelors degree) of the nurses. Nurses with a bachelors degree or less than a bachelors degree reported a similar number of perceived barriers to assisting ADV victims (M=1.53, SD=±1.15) as nurses with a masters degree or higher (M=1.37, SD=±1.16) and this was not statistically significantly different (t=1.387, df =402, p=0.16). This null hypothesis was accepted.

6.9. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school do not differ significantly based on whether the school nurse received any training on ADV.

An independent samples t-test was computed to assess the difference in number of perceived barriers to assisting ADV victims based on whether the school nurse received formal training on ADV related issues. Nurses who received training on ADV related issues perceived fewer barriers to assisting ADV victims (M=0.99, SD=±1.03) in the past 2 years compared to nurses who did not have formal training
on ADV related issues (M=1.67, SD=±1.15), and this was statistically significantly different (t=-5.580, df=402, p<0.001). Therefore, this null hypothesis was rejected.

Research Question 7- What are school nurses’ perceived roles in relation to preventing ADV?

7.1. The majority of school nurses would agree that “Students who are abused in a dating relationship need to be encouraged to report the abuse to the school nurse”.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (99.3%) of school nurses strongly agreed or agreed that students who are victimized in a dating relationship need to be encouraged to report the assault to the school nurse. Therefore, the null hypothesis was accepted.

7.2. The majority of school nurses would agree that, “It is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships”.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (99.3%) of school nurses strongly agreed or agreed that it is the role of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships. Therefore, the null hypothesis was accepted.
7.3. The majority of school nurses would agree that, “It is the role of school nurse to work closely with school administrators to help formulate appropriate dating violence policies for students.”

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (93.6%) of school nurses strongly agreed or agreed that it is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students. Therefore, the null hypothesis was accepted.

7.4. The majority of the school nurses would agree that, “It is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.”

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (93.6%) of school nurses strongly agreed or agreed that it is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence. Therefore, the null hypothesis was accepted.

7.5. The majority of school nurses would agree that, “School nurse should be educated to assist students who are abused in a dating relationship”.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (99.8%) of school nurses strongly agreed or agreed that school nurses should be educated to assist students who are abused in a dating relationship. Therefore, the null hypothesis was accepted.
7.6. **The majority of school nurses would agree that, “School nurse should assist the victims of dating violence by referring them to legal authorities”**.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (87.1%) of school nurses strongly agreed or agreed that school nurses should assist the victims of dating violence by referring them to legal authorities. Therefore, the null hypothesis was **accepted**.

7.7. **The majority of school nurses would agree that, “School nurses should be involved in developing the protocols that focus on how to deal with dating violence situations”**.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (96.3%) of school nurses strongly agreed or agreed that school nurses should be involved in developing the protocols that focus on how to deal with dating violence situations. Therefore, the null hypothesis was **accepted**.

7.8. **The majority of school nurses would agree that, “It is the role of school nurses to work closely with other school personnel to improve their skills in dealing with students who are victims of dating violence”**.

Frequencies for each response type (strongly agree/ agree/ disagree/ strongly disagree) were computed and it was found that the majority (93.6%) of school nurses strongly agreed or agreed that it is the role of school nurses to work closely with other school personnel to improve their skills in dealing with students who are victims of dating violence. Therefore, the null hypothesis was **accepted**.
Research Question 8- What is the level of knowledge of school nurses about ADV?

8.1. School nurses’ level of knowledge about ADV does not differ significantly based on the race/ethnicity of the school nurse.

An independent samples t-test was computed to assess the differences in nurses’ ADV knowledge score based on their racial/ethnic background (white versus non-white). White nurses had similar ADV knowledge scores (M=4.83, SD=±1.18) as minority nurses (M=5.01, SD=±0.97), and this was not statistically significantly different (t=-0.683, df = 402, p= 0.49). This null hypothesis was accepted.

8.2. School nurses’ level of knowledge about ADV does not differ significantly based on the age of the school nurse.

An independent samples t-test was computed to assess the difference in nurses’ ADV knowledge score based on the nurses age (<50 years of age versus ≥50 years of age). Younger nurses had similar ADV knowledge scores (M=4.98, SD=±1.16) as nurses in the older age group (M=4.79, SD=±1.17), and this was not statistically significantly different (t=1.443, df =402, p=0.15). This null hypothesis was accepted.

8.3. School nurses’ level of knowledge about ADV does not differ significantly based on the duration of employment as a school nurse.

An independent samples t-test was computed to assess the difference in the nurses’ ADV knowledge score based on the nurses duration of employment (≤12 years versus >12 years of employment). Nurses employed for fewer years had similar ADV knowledge scores (M=4.82, SD=±1.14) as nurses employed for a longer
duration (M=4.85, SD=±1.19), and this was not statistically significantly different 
(t=-0.306, df=401, p=0.76). This null hypothesis was accepted.

8.4. **School nurses’ level of knowledge about ADV does not differ significantly**
**based on the certification status of the school nurse.**

An independent samples t-test was computed to assess the differences in nurses’ ADV knowledge score based on the certification status of school nurses. The nurses who were certified had similar ADV knowledge scores (M=4.85, SD=±1.20) as nurses who were not certified (M=4.80, SD=±1.10), and these numbers were not statistically significantly different (t=0.447, df=402, p=0.65). Therefore, this null hypothesis was accepted.

8.5. **School nurses’ level of knowledge about ADV does not differ significantly**
**based on the employment status of the school nurse (full time vs. part time).**

An independent samples t-test was computed to assess the differences in nurses’ ADV knowledge score based on the employment status of the nurses (full time versus part time). The nurses who were employed full time had similar ADV knowledge scores (M=4.85, SD=±1.18) as nurses who were employed part-time (M=4.71, SD=±1.06), and these numbers were not statistically significantly different (t=0.764, df=402, p=0.44). This null hypothesis was accepted.

8.6. **School nurses’ level of knowledge about ADV does not differ significantly**
**based on the location of the school of the school nurse.**

A one way ANOVA was conducted to assess the differences in nurses’ ADV knowledge scores based on their geographical location of practice (urban/ suburban/rural). There was no statistically significant difference (F=0.34, df=2,
p=0.71) in the ADV knowledge scores of nurses practicing in urban (M=4.87, SD=0.99), suburban (M=4.79, SD=1.13), and rural (M=4.89, SD=1.34) locations. Therefore, this null hypothesis was accepted.

8.7. **School nurses’ level of knowledge about ADV does not differ significantly based on the highest level of education of the school nurse.**

An independent samples t-test was computed to assess the difference in nurses’ ADV knowledge scores based on their highest level of education (≤bachelors degree versus >bachelors degree). The nurses with a bachelors degree or less than a bachelors degree had similar ADV knowledge scores (M=4.83, SD=±1.18) as nurses with a masters degree or higher (M=4.85, SD=±1.14), and these numbers were not statistically significantly different (t=-0.180, df =402, p=0.85). This null hypothesis was accepted.

8.8. **School nurses’ level of knowledge about ADV does not differ significantly based on the number of schools served by the school nurse.**

An independent samples t-test was computed to assess the difference in nurses’ ADV knowledge scores between the nurses who served 1 school as opposed to nurses who served more than 1 school. The nurses who served only 1 school had similar ADV knowledge scores (M=4.86, SD=±1.17 as nurses who reported serving more than 1 school (M=4.81, SD=±1.16), and these numbers were not statistically significantly different (t = 0.439, df =398, p=0.66). This null hypothesis was accepted.

8.9. **School nurses’ level of knowledge about ADV does not differ significantly based on whether the school nurse received any training on dating violence.**
An independent samples t-test was computed to assess the difference in nurses ADV knowledge scores based on whether the school nurse received formal training on ADV related issues. The nurses who received training on ADV related issues had similar ADV knowledge scores (M=4.96, SD=±1.15) as nurses who did not have formal training on ADV related issues (M=4.79, SD=±1.17), and these numbers were not statistically significantly different (t=1.316, df =402, p=0.18). This null hypothesis was accepted.

4.13. Summary

The results of this study indicate that a vast majority (86.4%) of the responding school nurse’s schools do not have a protocol or procedure to follow when an incident of ADV is reported. Additionally, a plurality (47.0%) of the school nurses reported that they did not assist any victims of ADV in the past 2 years. Those nurses who reported assisting victims of ADV indicated that the most common type of assistance provided to the victim was a referral to the school counselor (43.1%). The major perceived barrier to assisting victims of ADV cited by a majority (54.0%) of the nurses was lack of training to help victims of ADV. A majority (55.6%) of the school nurses also reported that personnel in their school did not have the training to help victims of ADV. About 7 in 10 (70.9%) nurses reported that they did not have formal training on ADV related issues. A majority (>65%) of the school nurses reported that, their school’s violence prevention / Safe School policy does not addresses ADV, there is no disciplinary action for adolescent dating violence in the school's violence prevention policy, in the past 2 years training to assist victims of ADV has not been provided to their school personnel, they do not have a
school committee that meets periodically to address health and safety issues which include ADV, their school does not keep ADV complaints in a confidential file separate from academic records, their school does not have information posted about ADV that is easy for students to find, and their school does not conduct periodic student surveys that include questions on ADV behaviors. However, a majority of the school nurses reported that the students in their schools are educated on healthy dating relationships, ADV prevention, and where to report an incident of ADV. A total of 73 null hypotheses were tested for the purpose of this study out of which 63 were accepted, and 10 rejected. The perceived extent of ADV in the nurses’ school differed significantly based on the certification status of the school nurse and the location of the school of the school nurse. The reported ADV prevention activities in nurses’ schools differed significantly based on the duration of employment of the nurses, the certification status of the nurses, and based on whether the school nurse received any training on dating violence. The number of ADV victims who received assistance from school nurses in the past 2 years differed significantly based on the school nurses’ perceived extent of ADV problems in their schools, based on the duration of employment as a school nurse, based on the location of the school of the responding school nurse, based on the highest level of education of the school nurses, and based on whether the school nurse received any training on ADV. The current practices of schools in relation to having a protocol for dealing with an ADV incident differed significantly based on whether the school nurse received any training on ADV. The total number of school nurses’ perceived barriers to assisting student victims of ADV in their school differed significantly based on the duration of employment as a school nurse and based on whether the school nurse received any training on ADV.
Chapter 5

Conclusions

This chapter contains the following sections based on the results of this study: Summary, Accepted hypotheses, Rejected hypotheses, Discussion, Implications, and Recommendations.

5.1. Summary

This study was conducted to assess the school nurses practices and perceptions regarding adolescent dating violence. Specifically, answers to the following general questions were sought:

- What ADV prevention activities are currently being used in the high schools of the United States?
- What are the perceptions of high school nurses regarding the extent of ADV in schools?
- What is the proportion of high school nurses that assisted victims of ADV in the past 2 years? and what was the type of assistance provided?
- What are the barriers in assisting victims of ADV commonly faced by high school nurses?
• What is the reported level of knowledge of high school nurses about ADV?
• What is the nurse’s perceived role of other school personnel in responding to ADV incidents?
• Do demographic or background characteristics affect the answers to any of the aforementioned questions?

A questionnaire was developed to assess the school nurses practices and perceptions on ADV. This questionnaire was developed using 3 steps, a) a comprehensive review of literature was conducted to search relevant research articles on ADV, b) a panel of experts was established to assess the content validity of the questionnaire, c) a stability reliability analyses was conducted to assess the reliability of the questionnaire. Two health behavior theories were used to assess the organizational activities for assisting victims of ADV (Stages of Change theory and the Health Belief Model). In addition to the items related to these models and theories, items related to knowledge about ADV, perceived roles of school personnel in assisting victims of ADV, ADV prevention activities in schools, and number of ADV victims assisted in the past 2 years were also included in this questionnaire. The final instrument was a 4-page booklet style questionnaire that consisted of 28 items (including 10 items to assess demographic and background characteristics).

The sample for this cross sectional study was obtained from the National Association of School Nurses. A random sample of 750 high school nurses was selected for the study. A three wave mailing procedure was employed with standard techniques to improve the response rates ($1 bill, hand signed cover letters, survey, and self addressed, stamped return envelope). The response rate for the study was 57%.
The majority of responding school nurses were females (98.3%), white (94.1%), and in the age range of 50-59 years (56.4%). Also, a majority reported working full time (88.4%), were certified (68.6%), and did not get formal training to address ADV issues (70.9%). Most of the nurses had a bachelor’s degree or higher (88.1%). The majority of the nurses practiced in a urban or suburban location, whereas a little less than one third (30.9%) practiced nursing in a rural location. The average duration of employment as a full time school nurse was 13.40 years (S.D=±8.94). The average number of schools served by each nurse was 6.61 (S.D=±60.25), while the average number of students served by each nurse was 2561 (S.D=±5927). More than two thirds of the students served by the responding nurses were white (M=68.6%, S.D=±28.01).

Nurses who participated in the study were asked to rate the role of various school personnel in assisting victims of ADV. More than 9 in 10 believed that school counselors and school nurses should play a major role in assisting victims of ADV. More than one third believed that health teachers and peers had a minor role or no role in assisting victims of ADV. Overall, the majority of nurses believed that all of the school personnel assessed in the current study should play a major role in assisting victims of ADV. However, a little more than half (52.4%) of the nurses also believed that students (peers) should play a major role in assisting victims of ADV.

Nurses were asked to best describe their school practice with respect to having a protocol (or procedure) to follow when a student reports an incident of dating violence based on the Stages of Change Theory. A majority (57.9%) of the school nurses agreed that their school personnel had never seriously thought about creating a protocol for responding to a dating violence incident (i.e. precontemplation). A little less than a fifth
(17.1%) of the nurses reported that their school personnel have been “talking” about creating a protocol for responding to a dating violence incident or their school personnel have formal plans to implement a protocol for dating violence incidents in the next school year. Only a few (13.6%) nurses affirmed that their school personnel started following a protocol for dating violence incidents in the current year or they had been following a response protocol for dating violence incidents for more than 1 school year.

School nurses were asked to report if their school had certain practices and policies for prevention of ADV. Less than one fourth (21.8%) of the nurses reported that their school’s violence prevention/Safe School policy addressed ADV. A little more than one tenth (11.9%) of the nurses reported that training to assist victims of ADV was provided to their school personnel in the past 2 years. The majority of the school nurses indicated that their school educates students about dating violence prevention (54.2%), healthy dating relationships (66.3%), and about where to report an incident of dating violence (50.5%). More than a third (34.4%) of the school nurses indicated that their school had information posted about ADV that was easy for students to find.

Nurses were asked to write the number of victims of ADV assisted by them in the past 2 years and the gender of victims assisted by them. The majority of the school nurses (53.0%) had assisted victims of ADV in the past 2 years. Less than 1 in 10 (6.4%) high school nurses assisted a male victim of ADV, whereas more than half (52.5%) of the high school nurses assisted a female victim of ADV. Nurses were also asked to identify the type of assistance they provided to victims of ADV in the past 2 years. A plurality (43.1%) of nurses referred the victim to a school counselor. Almost 1 in 5 nurses
provided primary care to the victim (20.5%) or referred the victim to a school social worker (20.8%).

School nurses were also asked to rate their agreement with a series of statements on what should be the roles of school nurses in relation to preventing and responding to ADV. More than three fourths of the nurses agreed with all 8 statements (i.e. Students who are abused in a dating relationship need to be encouraged to report the abuse to the school nurse, it is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships, it is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students, it is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence, school nurses should be educated to assist students who are abused in a dating relationship, school nurses should assist the victims of dating violence by referring them to legal authorities, school nurses should be involved in developing the protocols that focus on how to respond to adolescent dating violence incidents, it is the role of school nurses to work closely with other school personnel to improve their skills in assisting students who are victims of dating violence. However, about 1 in 8 (12.9%) school nurses did not agree that school nurses should assist victims of dating violence by referring them to legal authorities. Additionally, more than 1 in 20 (6.4%) did not agree that it is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students or it is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.
A series of factual statements from peer reviewed scientific journals and government reports were used to assess the knowledge of high school nurses about ADV (Table 7). Of the 9 questions, 5 were answered correctly by more than half. A knowledge score was computed for the entire population of respondents. The possible range for knowledge scores was 0-9. However, the maximum score actually reported was 8. The average score for the population was 4.84 (S.D=±1.17) and the median score was 5.

School nurses were also asked to identify the barriers to assisting victims of ADV. First, the school nurses identified personal barriers. Second, the responding nurses identified a series of barriers for the schools. The main personal barriers identified by the nurses were, ‘I do not have the training to help victims of ADV’ (54.0%), ‘I do not have the private space needed to help victims of ADV’ (25.2%), ‘I do not have the time to help victims of ADV’ (25.2%). In relation to school barriers, slightly more than half (55.6%) of the school nurses reported that personnel in their school did not have the training to help victims of ADV. Almost 1 in 5 nurses reported that their school did not have enough personnel to help victims of ADV (20.3%) or ADV was a minor issue compared to other student health issues with which the school deals (23.0%) or the school administration does not want to deal with this sensitive issue (19.1%).

5.2. Accepted Hypotheses (n=63)

Out of the total hypotheses tested (n=73), the majority (n=63) of the hypotheses were accepted. A list of the accepted hypotheses is as follows:
1.1. The perceived extent of ADV in their school does not differ significantly based on the race/ethnicity of the school nurse.

1.2. The perceived extent of ADV in their school does not differ significantly based on the age of the school nurse.

1.3. The perceived extent of ADV in their school does not differ significantly based on the duration of employment as a school nurse.

1.5. The perceived extent of ADV in their school does not differ significantly based on the employment status of the school nurse (full time versus part time).

1.7. The perceived extent of ADV in their school does not differ significantly based on the highest level of education of the school nurse.

1.8. The perceived extent of ADV in their school does not differ significantly based on the number of schools served by the school nurse.

1.9. The perceived extent of ADV in their school does not differ significantly based on whether the school nurse received any training on dating violence.

2.1. ADV prevention activities in schools do not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.

2.2. ADV prevention activities in schools do not differ significantly based on the race/ethnicity of the responding school nurses.

2.3. ADV prevention activities in schools do not differ significantly based on the age of the school nurse.

2.5. ADV prevention activities in schools do not differ significantly based on the certification status of the school nurse.
2.6. ADV prevention activities in schools do not differ significantly based on the employment status of the school nurse (full time vs. part time).

2.7. ADV prevention activities in schools do not differ significantly based on the location of the school of the responding school nurse (urban vs. rural vs. suburban).

2.8. ADV prevention activities in schools do not differ significantly based on the highest level of education of the school nurse.

2.9. ADV prevention activities in schools do not differ significantly based on the number of schools served by the school nurse.

3.2. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the race/ethnicity of the responding school nurses.

3.3. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the age of the school nurse.

3.4. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the duration of employment as a school nurse.

3.5. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the certification status of the school nurse.

3.6. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the employment status of the school nurses (full time vs. part time).
3.7. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the location of the school of the responding school nurse (Urban vs. Rural vs. Suburban).

3.8. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the highest level of education of the school nurses.

4.1. The current practices of schools in relation to having a protocol for dealing with an ADV incident do not differ significantly based on the nurse’s perceived extent of ADV problem in their schools.

4.2. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the race/ethnicity of the school nurse.

4.3. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the age of the school nurse.

4.4. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the duration of employment as a school nurse.

4.5. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the certification status of the school nurse.

4.6. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the employment status of the school nurse (full time vs. part time).
4.7. The current practices of the schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the location of the school of the school nurse (Urban vs. Rural vs. Suburban).

4.8. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on the highest level of education of the school nurse.

5.1. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the perceived extent of ADV problems in their schools.

5.2. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the race/ethnicity of the school nurse.

5.3. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the age of the school nurse.

5.4. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the duration of employment as a school nurse.

5.5. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the certification status of the school nurse.
5.6. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the employment status of the school nurse (full time vs. part time).

5.7. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the location of the school of the school nurse.

5.8. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on the highest level of education of the school nurse.

5.9. The school nurse’s perceptions of the roles of various school personnel with regards to assisting student victims of ADV do not differ significantly based on whether the school nurse received formal training on ADV.

6.1. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the perceived extent of ADV problems in their schools.

6.2. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the race/ethnicity of the school nurse.

6.3. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the age of the school nurse.
6.5. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the certification status of the school nurse.

6.6. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the employment status of the school nurse (full time versus part time).

6.7. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the location of the school of the school nurse.

6.8. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the highest level of education of the school nurse.

7.1. The majority of school nurses would agree that “Students who are abused in a dating relationship need to be encouraged to report the abuse to the school nurse”.

7.2. The majority of school nurses would agree that, “It is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships”.

7.3. The majority of school nurses would agree that, “It is the role of school nurse to work closely with school administrators to help formulate appropriate dating violence policies for students.”

7.4. The majority of the school nurses would agree that, “It is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.”
7.5. The majority of school nurses would agree that, “School nurse should be educated to assist students who are abused in a dating relationship”.

7.6. The majority of school nurses would agree that, “School nurse should assist the victims of dating violence by referring them to legal authorities”.

7.7. The majority of school nurses would agree that, “School nurses should be involved in developing the protocols that focus on how to deal with dating violence situations”.

7.8. The majority of school nurses would agree that, “It is the role of school nurses to work closely with other school personnel to improve their skills in dealing with students who are victims of dating violence”.

8.1. School nurse’s level of knowledge about ADV does not differ significantly based on the race/ethnicity of the school nurse.

8.2. School nurse’s level of knowledge about ADV does not differ significantly based on the age of the school nurse.

8.3. School nurse’s level of knowledge about ADV does not differ significantly based on the duration of employment as a school nurse.

8.4. School nurse’s level of knowledge about ADV does not differ significantly based on the certification status of the school nurse.

8.5. School nurse’s level of knowledge about ADV does not differ significantly based on the employment status of the school nurse (full time vs. part time).

8.6. School nurse’s level of knowledge about ADV does not differ significantly based on the location of the school of the school nurse.
8.7. School nurse’s level of knowledge about ADV does not differ significantly based on the highest level of education of the school nurse.

8.8. School nurse’s level of knowledge about ADV does not differ significantly based on the number of schools served by the school nurse.

8.9. School nurse’s level of knowledge about ADV does not differ significantly based on whether the school nurse received any training on dating violence.

5.3. **Rejected Hypotheses (n=10)**

1.4. The perceived extent of ADV in their school does not differ significantly based on the certification status of the school nurse.

1.6. The perceived extent of ADV in their school does not differ significantly based on the location of the school of the school nurse (urban vs. rural vs. suburban).

1.10. There is no difference between the extent of ADV in US schools as compared to the responding nurse’s schools.

2.4. ADV prevention activities in schools do not differ significantly based on the duration of employment as a school nurse.

2.10. ADV prevention activities in schools do not differ significantly based on whether the school nurse received any training on dating violence.

3.1. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on the school nurse’s perceived extent of ADV problem in their schools.
3.9. The number of ADV victims who received assistance from school nurses in the past 2 years does not differ significantly based on whether the school nurse received any training on ADV.

4.9. The current practices of schools in relation to having a protocol for dealing with an ADV incident does not differ significantly based on whether the school nurse received any training on ADV.

6.4. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on the duration of employment as a school nurse.

6.9. The total number of school nurse’s perceived barriers to assisting student victims of ADV in their school do not differ significantly based on whether the school nurse received any training on ADV.

5.4. Discussion

A comprehensive review of the literature failed to reveal published literature on school nurses practices and perceptions on ADV. Also, a systematic examination of the literature found no published studies on school system’s and other school personnel’s perceptions and practices on ADV. To date, all research has been conducted from the perspective of the victims and perpetrators of ADV. These research studies identify and describe romantic relationships in adolescence, epidemiology of ADV, risk factors and predictors of ADV, and signs, symptoms and health outcomes of ADV. Most of these research studies discuss how schools can act as an important avenue for preventing ADV
and how health professionals and school personnel can act as a crucial factor for ADV prevention.

A lack of an understanding of what school personnel are doing in relation to preventing and responding to ADV severely limits our understanding of the epidemiology of ADV in the United States. Therefore, this study was conducted to assess the perceptions and practices of a group of professionals who can most likely have the greatest impact on ADV prevention in schools and are the major providers of primary care to students (i.e. school nurses).

5.4.1. Having an Adolescent Dating Violence Incident Response Protocol

The findings from the current study reveal that the majority (86.4%) of the responding school nurses did not have a school protocol or procedure to be followed when an incident of ADV was reported. This stands in stark contrast with many of the sexual and domestic violence issues in adults. Several response protocols have been developed at the local, state, and national levels for adult intimate partner violence in the United States (National Criminal Justice Reference Service, 2002; Washington State Coalition Against Domestic Violence, 2003; The Virginia Tech Sexual Violence Prevention Council, 2004; The Grey Bruce Violence Prevention Coordinating Committee, 2006; National Sexual Violence Resource Center, 2009). Additionally, the American Academy of Pediatrics has published several dossiers which recommend that schools and more specifically, school nurses, should provide health screenings, state mandated services, and should have the capability to handle emergencies and other urgent situations. ADV incidents may present as emergency and non-emergency
situations; it remains unclear how student victims of ADV can obtain assistance from school nurses or other school personnel in the absence of a well defined response protocol irrespective of the severity of ADV incident (School Health Committee, 2001; School Health Committee, 2008).

According to the current study, it was at least true to some extent that nurses in the schools with protocols for responding to ADV incidents were more likely to assist ADV victims. Considering that almost 1 in 10 high school students in the United States are a victim of ADV (Silverman et al., 2001; Grunbaum et al., 2002; Howard et al., 2003), high schools should develop response protocols for dealing with an ADV incident. These protocols should include medical and legal response protocols and should be developed with the help of school nurses (Texas Council on Family Violence, 2010). In one section of the questionnaire used for this study, school nurses were asked to rate their agreement with the statement “school nurses should be involved in developing the protocols that focus on how to respond to adolescent dating violence incidents,” and more than 9 in 10 nurses agreed with the statement. There are recommendations for protocols and sample protocols have been developed by non profit groups and state health departments however, most of these protocols differ in their approach. Additionally, there are no nationally standardized protocols. Thus, professional organizations like the National Association of School Nurses and the American School Health Association should explore the possibility of including workshops at their national conferences on this topic and publishing in their professional journals a model protocol for responding to ADV incidents. Interestingly, several states have laws for ADV prevention but only a few state laws have a provision for school based ADV incident response protocols, and for
the most part there are no concrete recommendations (National Conference of State Legislatures, 2010).

5.4.2. Roles of School Personnel in Assisting Victims of ADV

Another important finding of this study came from the perceptions of nurses in relation to what should be the role of various school groups in assisting victims of ADV. The majority (>60%) of the school nurses agreed that health teachers, school counselors, school administrators, school social workers, and school resource officers should all play a major role in assisting victims of ADV. This would mean that the nurses believe that assisting victims of ADV is not the sole responsibility of one group. It also indicates that nurses tend to believe that an interdisciplinary team or group of professionals should be responsible for assisting victims of ADV. Also, it would be prudent to involve all these professionals in developing response protocols and programs to reduce and prevent ADV. Such collaboration is congruent with recommendations from interest groups which call for a coordinated action by various groups of school professionals (American Bar Association, 2006) including school administrators, social workers, school counselors, and health teachers.

Interestingly, the majority (52.4%) of nurses also believed that peers of the victims of ADV should play a major role in assisting the victims. This has an important implication for health education. The adolescent victims are most likely to discuss their violent relationships and the associated circumstances with peers. Even though teens rely more on peers to discuss abusive dating relationships, often times peer groups are not able to provide appropriate guidance. According to one particular study, adolescents who
told a peer about being severely victimized were more likely to receive an avoidance response than those adolescents who told about less severe dating violence (Weisz, Tolman, Callahan, Saunders, & Black, 2007). In the worst case scenario, peers might approve of victimization in a dating relationship which could be detrimental to the adolescent involved in an ongoing violent relationship. Thus, to make sure that peer education regarding ADV is valid, it is essential that dating relationships be included in school health education programs (ASTHO, 2010; Ball, and Rosenbluth, 2010)

5.4.3. Barriers to Assisting Victims of ADV

A plurality (44.7%) of nurses reported that they did not assist a victim of ADV in the past 2 years. Again, this would probably mean that ADV victims in some schools receive no assistance unless other school professionals are involved in assisting victims of ADV. Why would nurses not assist the victims of ADV? Do nurses lack the knowledge to assist victims? Do nurses perceive there to be too many barriers to assisting victims of ADV? Is it because nurses do not perceive ADV to be a serious problem in the US schools or their own schools?

A majority (70.9%) high school nurses indicated that they did not receive any formal training on ADV related issues. Also, one of the barriers to assisting victims of ADV identified by the majority (54.4%) of the nurses was lack of training to help the victims. This indicates that school nurses need training in the area of intimate partner violence in adolescence. Several nurses indicated on the comments section of the questionnaire that they would prefer to have training or would want to know a source for such training. It is important to note that the training needs of school nurses should be
conducted at two levels, training for future school nurses and training for currently practicing school nurses. College curriculum for school nursing programs should include training on ADV (e.g. recognizing the signs and symptoms of ADV, medical response strategies, legal aspects of ADV, referral skills, counseling techniques, and developing and implementing prevention programs, etc). In addition, for those nurses already practicing, both school systems and professional organizations need to provide continuing education workshops on how to prevent ADV and how to provide medical and legal assistance to the victims of ADV (Crime and Violence Prevention Center at California Attorney General’s Office, 2008). One of the major findings of the current study was that the school nurses who had state or national certification were significantly more likely to have assisted victims of ADV in the past 2 years. It implies that those nurses who have certification are likely more aware of the problem or are more proficient in assisting the victims. In either case, nurses should be motivated to obtain certification and school administrations should emphasize the need for nurses to be certified in order to improve the outreach efforts for assisting ADV victims along with other student health issues. As of now a little less than half (49%) of schools require nurses to have state certification (Brener et al., 2007). The National Association of School Nurses has published numerous position statements on topics such as licensure, education, and certification. However, there is still a considerable need for nurses to be certified in order to provide better assistance to students (National Association of School Nurses, 2002). Interestingly, the National Association of School Nurses has not yet published a specific position statement regarding ADV.
Apart from lack of training, almost 1 in 5 nurses reported that they did not have the time to help victims and they did not have the private space required to assist victims of ADV. Due to the age of ADV victims and the sensitive nature of the problem, schools should make arrangements for private space needed to assist ADV victims and to resolve the ongoing problems in the victims and perpetrators lives. Lack of time and resources were also identified by the school nurses as barriers to assisting victims of ADV. This is not surprising given the extremely high student population to school nurse ratio, a nationwide problem confirmed by the latest SHPPS study (Brener, Wheeler, Wolfe, Vernon-Smiley, and Caldart-Olson, 2007). Another striking finding of the current study is that controlling for intervening variables it was found that the number of schools served by a school nurse was a significant predictor of whether the school nurses assisted victims of ADV in the past 2 years. School based health clinics and school nurses are the primary health care providers for millions of youth in the United States. However, if ADV victims are to receive proper assistance from school nurses, the student population to nurse ratio should be more balanced in order for students to receive comprehensive quality health related services (Brener et al, 2007). The latest School Health Policies and Programs Study suggests that the extent of school health services should be improved, and school districts should have legislative and economic support to make this happen. Increasing the proportion of schools with adequate school nurses is one of the critical steps towards enabling schools to provide more services (e.g. assisting victims of ADV). Currently, only a little more than a third (35.7%) of US schools have a full time nurse (Brener et al, 2007). This would imply that nursing services for the majority of ADV
victims are not being provided or the services are being provided by another school professional instead of nurses.

Finally, almost 1 in 5 (23.8%) responding school nurses reported that a barrier to assisting victims of ADV is that ADV was perceived to be a minor issue compared to other student health issues that nurses dealt with. This barrier has several implications for intervening with ADV victims. First, the school nurses do not have enough time to deal with this issue and second, nurses may not perceive ADV to be a major problem in their schools. One of the questions answered through this study was the nurse’s perceptions of the extent of ADV in their schools. Almost 1 in 10 (10.6%) nurses reported that ADV is not a problem in their schools and the average extent of the ADV problem in the nurse’s school was 2.65 (SD=0.91) on a scale of 1 to 5. This would mean that apart from lack of training, space, and time, nurses often do not perceive ADV to be a serious problem even though almost one tenth of the high school students in the US are victims of physical dating violence. Nurses should be sensitized to the issue and should be provided training on ADV.

5.4.4. Nurses’ Knowledge of ADV

The average knowledge score for the sample of school nurses was a little more than half of the total score. Additionally, the majority of school nurses did not know that abuse in a dating relationship occurs more commonly in students from lower socioeconomic backgrounds compared to students from higher socioeconomic backgrounds and occurs more frequently among racial and ethnic minorities as compared to whites (Grunbaum et al., 2002; Howard et al., 2003; Howard et al., 2003; Grunbaum et
This may be because the majority of the nurses never received formal training on ADV. In these circumstances it is highly unlikely that nurses would take special note of the high risk groups such as minority and poor students. In order for nurses to better serve these populations, they have to be educated on the increased risk of victimization in the aforementioned high risk populations (Close, 2005).

5.4.5. Types of Assistance Provided to Victims of ADV

One particular finding of this study pertains to the type of assistance provided by high school nurses to victims of ADV. A plurality (43.1%) of nurses referred the victims to a school counselor. This is in agreement with the belief of nurses that school counselors should play a major role in assisting victims of ADV. However, there is a dearth of empirical evidence to show that school counselors agree with school nurses and if school counselors are trained any better to deal with ADV than school nurses. If counselors are not better trained, then referral to school counselors may not result in any tangible benefits to ADV victims. Also, it remains unclear how health related consequences of ADV are addressed by school nurses when referrals are made to school counselors. School nurses still need to address health related issues which are often times complicated in ADV (e.g. teen pregnancy, sexually transmitted disease, and behavioral problems etc) (Silverman et al., 2001; Close, 2005). Less than 1 in 10 (9.9%) school nurses reported providing other types of assistance (e.g. provided advise/emotional support, referred the student to assistant principal, basic counseling and answers to questions of females who become pregnant, provided information on what is an abusive relationship, mental health services and referral to community based organizations, one
on one health teaching, recommended counseling then followed up with calls to encourage counseling, referred to domestic abuse shelter/resource center etc). This highlights the need for an interdisciplinary response team for ADV. Therefore, nurses should be educated and motivated to explore their options in relation to assisting victims of ADV (Muscari, 2005). Interestingly, the National Association of School Nurses has published the standards for school nursing practice (NASN, 2005) but the practices described are way too broad to address ADV issues.

5.4.6. Perceived Roles of Nurses

Preventing ADV and responding to ADV incidents can be a daunting task for schools considering the countless other responsibilities of schools towards students’ education, safety, and health. Therefore, it is important to know what role nurses would prefer to play as it relates to ADV. Findings from the current study indicate that nurses perceive a major role in assisting victims of ADV. Additionally, more than 90% of the nurses agreed that students who are abused should report the abuse to them and it is also their role to ensure that students report any occurrence of abuse in their dating relationships. Some nurses reported on the comments section in the questionnaire that there was often a wide gap between them and the rest of the school personnel, thus creating problems in terms of role delineation and responsibilities of assisting ADV victims. In view of this, most school nurses agreed it is one of their roles to work closely with school administrators to help formulate appropriate dating violence policies for students and that it is one of their roles to work closely with school personnel to help them be able to identify victims of adolescent dating violence. Overall, the majority of
nurses perceived they had major responsibility for ADV prevention and school administrators should keep this in view while attempting to address ADV related issues.

5.4.7. School Policies and Practices

Several nonprofit groups and organizations recommend actions by schools to prevent ADV. The recommended actions include a plethora of possible ways in the form of school compliance checklists to tackle ADV like providing staff, faculty and administrator training on teen dating violence and sexual assault, educating students about teen dating violence, sexual assault and healthy dating relationships, having a policy that addresses teen dating violence and sexual violence, keeping teen dating and sexual violence complaints and investigations in a separate file from academic records, and having information posted around campus about teen dating violence (California Women’s Law Center, 2007; Crime and Violence Prevention Center at California Attorney General’s Office, 2008; Office of Safe and Drug-Free Schools, 2010; National Conference of State Legislatures, 2010; Legal Momentum, 2010). Based on these recommendations and a comprehensive review of the literature, nurses were specifically asked to identify the ADV prevention activities employed by their schools. Unfortunately, the only prevention activity reported by the majority of the school nurses was educating students on ADV (healthy dating relationships, dating violence prevention, and where to report an incident of dating violence). Staff training on ADV has not been provided in the majority of the high schools. Therefore, even if the school personnel are willing to assist student victims of ADV or are required to assist victims of ADV, in all likelihood they cannot provide comprehensive quality assistance. A recent study
indicated that the majority of the states (64%-87%) have adopted a policy stating that districts or schools will provide identification of or referral for physical, sexual, or emotional abuse (Brener et al, 2007). However, in the absence of staff training on ADV it is highly unlikely that student victims will receive adequate assistance irrespective of the state laws.

As mentioned earlier, responding to ADV may require coordinated and regular efforts by various groups of school personnel but the majority of the school nurses in the current study reported that they did not have a school committee that meets periodically to address health and safety issues which include ADV. Furthermore, ADV is not addressed in the Safe School policy of a majority of the schools. If the school systems do not have a specific policy it is highly unlikely that school employees would consider ADV prevention a priority issue. Also, in order to restrain ADV behaviors in students, disciplinary action and policy can play an important role. Another prevention activity that would be considered a bare minimum effort by the schools is having information posted about ADV that is easy for students to find. However, only about a third of the nurses reported that their schools had information posted. Considering that school nurses and counselors cannot provide one-on-one assistance to all students, posting information on ADV can be of great significance. Students would generally be aware of ADV and how to deal with a situation of abuse in a dating relationship.

In an ideal situation, schools in the US should have ADV prevention programs because of the prevalence of such violence among students. However, in order to start somewhere the minimum that a school administration can do is conduct regular surveillance. Findings from this study indicate that the majority of the schools do not
conduct periodic student surveys that include questions on ADV behaviors. This should be the first step in thinking about or planning a strategy to reduce or prevent ADV. Without knowing the prevalence of the problem in the schools and the characteristics of the students involved, the school systems would not be able to target appropriate interventions. Having a regular assessment would also help sensitize the school personnel towards this issue if school based assessments reveal that ADV is a serious ongoing problem with their students.

5.5. Implications

Based on the review of related literature and findings of the current study, the following suggestions are offered to improve the school nurses’ outreach efforts for ADV:

First, schools should regularly assess in their student body the extent of ADV and its epidemiological characteristics. Coordinated efforts would help reach the maximum number of high school students as opposed to disjointed efforts by individual school personnel.

Second, organizations with concerns for school health (i.e., ASHA, NASN) should provide continuing education for school personnel including school nurses on how to assist student victims of ADV and how to improve the ADV prevention efforts in schools. School nurses, as trained health professionals, should be the initial point of contact for ADV victims because of the health and safety related consequences of ADV.

Third, advocacy efforts should use the results from the current study to provide information to legislators and school administrators regarding the role schools could and
should play in preventing ADV and providing assistance to ADV victims. Several states have laws on ADV and these efforts could facilitate additional ideas and strategies for preventing ADV.

5.6. Recommendations

5.6.1. Recommendations for Research

1. More comprehensive epidemiological assessments of the characteristics of ADV in the US are needed.
2. Investigators should provide operational definitions for ADV in their research and should follow a standard definition as provided by the CDC.
3. Additional research is needed to assess the health related and legal consequences of ADV for an adolescent and to understand what strategies are most effective at reducing the levels of ADV in schools.
4. Research is needed to understand the college training of school personnel regarding ADV.
5. Program planners need to conduct additional research to develop prevention programs for reducing or eliminating ADV problems in schools. This research should focus on behavioral outcomes for adolescents in addition to improvement in ADV knowledge of adolescents.
6. Research is needed to assess the roles played by school counselors, school social workers, resource officers and school administration in preventing and reducing ADV. Also, the roles played by the aforementioned in responding to a victim of ADV need to be explored.
7. Research is needed to characterize school environments that have higher rates of ADV compared to schools with low levels of ADV.

5.6.2. Recommendations for Practice

1. Schools should have a protocol for responding to an incident of ADV in order to improve the outreach efforts for assisting victims of ADV.

2. School districts should have their own policies for ADV irrespective of the federal and state regulations.

3. School personnel should have periodic in-service education on ADV related issues (e.g. continuing education workshops).

4. Schools should provide education to students on healthy relationships and ADV prevention as a part of the health education curriculum.

5. Schools should post information about ADV so that it is easy for students to find. Additional efforts and measures to improve student awareness about ADV and the consequences of such behavior should be a part of special interventions (e.g. ADV awareness week).

6. Periodic assessments of ADV prevalence should be conducted by all high schools (e.g. using YRBSS and NLSAH questions to conduct school based assessments).
References


http://www.legalmomentum.org


Hawaiian, and Caucasian high school students in Hawaii. *Journal of School Health*, 76 (8), 423-429.


Smith, P. H., White, J. W., & Morroco, B. (2009). Becoming who we are: A theoretical explanation of gendered social structures and social networks that shape adolescent interpersonal aggression. *Psychology of Women Quarterly, 33*, 25-29.


Information Center web site:

http://www.womenshealth.gov/violence/types/dating.cfm


Appendix A

Human Subjects Approval Letter
To: Susan Telljohann, Ph.D. and Jagdish Khubchandani  
Department of Health and Human Services

From: Barbara K. Chesney, Ph.D., Chair  
Wesley A. Bullock, Ph.D., Vice Chair

Signed: B.K. Chesney  
Date: 03/12/10

Subject: IRB #106888  
Protocol Title: Adolescent Dating Violence: School Nurses Practices and Perceptions

On 03/12/10, the Protocol listed below was reviewed and approved by the Chair and Chair Designee of the University of Toledo (UT) Social Behavioral & Educational Institutional Review Board (IRB) via the expedited process. You have also been granted a waiver from the requirements of a written consent form. This action will be reported to the committee at its next scheduled meeting.

Items Reviewed:
- IRB Application Requesting Expedited Review
- Survey(s) (version date 03/12/10)
- Recruitment Letter (version date 03/12/10)

This protocol approval is in effect until the expiration date listed below, unless the IRB notifies you otherwise.

Only the most recent IRB approved Consent/Assent form(s) listed above may be used when enrolling participants into this research.

Approval Date: 03/12/10  Expiration Date: 03/11/11  
Number of Subjects Approved: 800

Please read the following attachment detailing Principal Investigator responsibilities.
Appendix B

Survey Instrument
Adolescent Dating Violence Survey

Adolescent Dating Violence is defined as the physical, sexual, or psychological/emotional abuse within a dating relationship for this survey. Do NOT put your name on this survey. Your answers are confidential. Thank You!

1. In your opinion, to what extent is adolescent dating violence a problem in U.S. schools?
   - No problem 1........2........3........4........5 Major problem

2. In your opinion, to what extent is adolescent dating violence a problem in your school?
   - No problem 1........2........3........4........5 Major problem

For each of the following items, please circle the response that best describes the practice of your school.

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>NOT SURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Our school's violence prevention/Safe School policy addresses adolescent dating violence. If yes, is disciplinary action for adolescent dating violence specified in the policy?</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Don't Know</td>
</tr>
<tr>
<td>4. In the past 2 years training to assist victims of adolescent dating violence has been provided to our school personnel.</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td>5. We have a school committee that meets periodically to address health and safety issues which include adolescent dating violence.</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td>6. Our school keeps adolescent dating violence complaints in a confidential file separate from academic records.</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td>7. Our school conducts periodic student surveys that include questions on adolescent dating violence behaviors.</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td>8. Our school educates students about: Dating violence prevention............................ Healthy dating relationships.......................... Where to report an incident of dating violence...</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
<tr>
<td>9. Our school has information posted about dating violence that is easy for students to find. If yes, where? (please identify)</td>
<td>Y</td>
<td>N</td>
<td>NS</td>
</tr>
</tbody>
</table>

10. In the past 2 years, approximately how many victims of adolescent dating violence did you assist? (numbers)
11. If you assisted student victims of adolescent dating violence, how many were: Males Females
12. If you assisted victims of adolescent dating violence, indicate how you assisted (Please check all that apply)

- Referred the victim to school counselor.
- Reported the incident to child protection agencies.
- Helped the victim obtain protective orders.
- Called the parents/guardians of the victim to inform them.
- Provided primary care.
- Referred student to legal authorities.
- Reported the incident to teachers.
- Referred the victim to a physician/medical clinic
- Referred the victim to school social worker.
- Other (please identify) ____________________________
13. Which of the following best describes your school with respect to having a protocol (or procedure) to follow when a student reports an incident of dating violence? (Please check only one)

☐ Our school personnel have never seriously thought about creating a protocol for responding to a dating violence incident.
☐ Our school personnel have been “talking” about creating a protocol for responding to a dating violence incident.
☐ Our school personnel have formal plans to implement a protocol for dating violence incidents in the next school year.
☐ Our school personnel started this school year following a protocol for dating violence incidents.
☐ We have been following a response protocol for dating violence incidents for more than 1 school year.

14. Please circle the role various school personnel should play in assisting victims of adolescent dating violence...

<table>
<thead>
<tr>
<th>Group (circle 1 for each group)</th>
<th>Major Role</th>
<th>Minor Role</th>
<th>No Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Teachers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Counselors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Nurses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Administrators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Social Workers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students (peers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Resource Officers (police)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Please check ALL items below that are barriers to helping victims of adolescent dating violence.

<table>
<thead>
<tr>
<th>Barriers for you</th>
<th>Barriers for school</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not my responsibility to help victims of adolescent dating violence.</td>
<td>It is not the school's responsibility to help victims of adolescent dating violence.</td>
</tr>
<tr>
<td>I do not have the private space needed to help victims of adolescent dating violence.</td>
<td>Our school does not have enough personnel to help victims of adolescent dating violence.</td>
</tr>
<tr>
<td>I do not have the time to help victims of adolescent dating violence.</td>
<td>Personnel in our school do not have the time to help victims of adolescent dating violence.</td>
</tr>
<tr>
<td>I do not have the training to help victims of adolescent dating violence.</td>
<td>Personnel in our school do not have the training to help victims of adolescent dating violence.</td>
</tr>
<tr>
<td>Parents will not approve of my involvement in helping victims of adolescent dating violence.</td>
<td>Parents will not approve of school's involvement in helping victims of adolescent dating violence.</td>
</tr>
<tr>
<td>Adolescent dating violence is a minor issue compared to other student health issues with which I deal.</td>
<td>Adolescent dating violence is a minor issue compared to other student health issues with which the school deals.</td>
</tr>
<tr>
<td>Other (please identify)</td>
<td>Other (please identify)</td>
</tr>
</tbody>
</table>
16. Please circle the response which best represents your beliefs regarding the following statements. (SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly disagree)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Students who are abused in a dating relationship need to be encouraged to report the abuse to the school nurse.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>b. It is one of the roles of school nurses to cultivate the trust of students so that students report any occurrence of abuse in their dating relationships.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>c. It is the role of school nurses to work closely with school administrators to help formulate appropriate dating violence policies for students.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>d. It is the role of school nurses to work closely with school personnel to help them be able to identify victims of adolescent dating violence.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>e. School nurses should be educated to assist students who are abused in a dating relationship.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>f. School nurses should assist the victims of dating violence by referring them to legal authorities.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>g. School nurses should be involved in developing the protocols that focus on how to respond to adolescent dating violence incidents.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>h. It is the role of school nurses to work closely with other school personnel to improve their skills in assisting students who are victims of dating violence.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
</tbody>
</table>

17. Please circle the response which best represents your beliefs regarding adolescent dating violence. (SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly disagree)

<table>
<thead>
<tr>
<th></th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Abuse in a dating relationship occurs more commonly in students from a lower socioeconomic backgrounds compared to students from higher socioeconomic backgrounds.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>b. Physical dating violence is more common against adolescent females than males.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>c. Less than 5% of high school students experience physical dating violence.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>d. Adolescent dating violence occurs more frequently among racial and ethnic minorities as compared to whites.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>e. Girls who report physical or sexual dating abuse have higher rates of drug, alcohol, and tobacco use than girls who report no abuse.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>f. Dating abuse can lead to risky sexual behaviors that can result in unintended pregnancy, sexually-transmitted diseases, and HIV infections.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>g. Patterns of dating violence behavior often start in adolescence early and carry through into adult relationships.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>h. Children who have been abused are more likely to become perpetrators or victims of dating violence.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>i. Victims of dating violence typically talk about the abuse with their peers.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
</tbody>
</table>
Demographic Information- This information is being collected to assess representativeness of the sample.

1. What is your sex?  ____ Female  ____ Male

2. What is your race/ethnicity?  ____ African American  ____ Asian  ____ Hispanic  ____ White  ____ Other (please identify)________________

3. Your age?  ____ 20-29 years  ____ 30-39 years  ____ 40-49 years  ____ 50-59 years  ____ 60+ years

4. How many years have you worked as a school nurse?  ____ # of years full time  ____ # of years part-time

5. What is your current employment status as a school nurse?  ____ Full time  ____ Part time

6. Are you certified as a school nurse?  ____ Yes  ____ No
   If yes, which do you have:  ____ State certification  ____ National certification  ____ Both

7. Location of your school:  ____ Urban  ____ Suburban  ____ Rural

8. Number of schools you serve:  ____ Approximate number of students enrolled in your school(s):_______

9. What is your highest level of education?
   ____ Associates Degree  ____ Diploma  ____ Bachelors Degree  ____ Masters Degree  ____ Doctorate

10. Please describe the approximate racial/ethnic composition of your school’s student population?
    White:  ____ %  Non-White:  ____ %  =100 %

11. Have you received any formal training to address adolescent dating violence issues?  ____ Yes  ____ No
    If yes, where did you get this training? (please check all that apply)
    ____ College coursework
    ____ Professional conference
    ____ In-service education
    ____ Professional journals
    ____ Continuing education
    ____ Other source (please identify)...........................................

Do you have any comments on this topic we did not ask about that you would like to share with us?

______________________________________________________________________________

Thank you for your time and professional courtesy. Please return this survey in the postage-paid envelope provided.
Appendix C

Expert Review Panel
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherry Everett-Jones, PhD, MPH</td>
<td>Centers for Disease Control and Prevention, 4770 Buford Hwy NE, Atlanta, GA 30341, e-mail: <a href="mailto:sce2@cdc.gov">sce2@cdc.gov</a></td>
</tr>
<tr>
<td>Steve Nagy, PhD</td>
<td>Associate Professor, Western Kentucky University, Bowling Green, KY-42101, e-mail: <a href="mailto:steve.nagy@wku.edu">steve.nagy@wku.edu</a></td>
</tr>
<tr>
<td>Diane M. Hall, Ph.D.</td>
<td>Division of Violence Prevention, Centers for Disease Control and Prevention, Atlanta, GA, USA, e-mail: <a href="mailto:fqx7@cdc.gov">fqx7@cdc.gov</a></td>
</tr>
<tr>
<td>Danice K. Eaton, PhD, MPH</td>
<td>Division of Adolescent and School Health, Centers for Disease Control and Prevention, Atlanta, GA, USA, e-mail: <a href="mailto:dhe0@cdc.gov">dhe0@cdc.gov</a></td>
</tr>
<tr>
<td>Keith A King, PhD</td>
<td>Professor of Health Promotion, University of Cincinnati, Cincinnati, OH-45221, e-mail: <a href="mailto:keith.king@uc.edu">keith.king@uc.edu</a></td>
</tr>
<tr>
<td>Joan R. Griffith, MD, MPH, FAAP</td>
<td>Associate Professor and Chief, Division of General Academic Pediatrics, University of Toledo, Toledo, OH 43614, e-mail: <a href="mailto:Joan.Griffith@utoledo.edu">Joan.Griffith@utoledo.edu</a></td>
</tr>
<tr>
<td>Phyllis Lewis, RN, MSN</td>
<td>Indiana Department of Education, Office of Student Services, Indianapolis, IN 46204, e-mail: <a href="mailto:plewis@doe.in.gov">plewis@doe.in.gov</a></td>
</tr>
<tr>
<td>Sandra Leonard, RN, MS, FNP</td>
<td>DASH Project Officer, Centers for Disease Control and Prevention, Atlanta, GA, USA, e-mail: <a href="mailto:kbq7@cdc.gov">kbq7@cdc.gov</a></td>
</tr>
<tr>
<td>Adam Mrdjenovich, PhD</td>
<td>Visiting faculty, University of Toledo, Toledo, OH-43606, e-mail: <a href="mailto:adam.mrdjenovich@utoledo.edu">adam.mrdjenovich@utoledo.edu</a></td>
</tr>
<tr>
<td>Megan Rickard, PhD, CHES</td>
<td>Assistant Professor, Eastern Michigan University, Ypsilanti, MI, USA 48197, <a href="mailto:mrickard9@gmail.com">mrickard9@gmail.com</a></td>
</tr>
<tr>
<td>Christine M. Nagy, PhD</td>
<td>Associate Professor, Western Kentucky University, Bowling Green, KY-42101, <a href="mailto:chris.nagy@wku.edu">chris.nagy@wku.edu</a></td>
</tr>
<tr>
<td>Martha D Bergren, DNS, NCSN, FASHA</td>
<td>Director of Research, National Association of School Nurses, Silver Spring, MD 20910, <a href="mailto:mbergren@nasn.org">mbergren@nasn.org</a></td>
</tr>
<tr>
<td>Tina Dake</td>
<td>Health and Physical Education Teacher, Whitmer High School, Toledo, OH 43613</td>
</tr>
</tbody>
</table>
Appendix D

Cover Letter: Panel of Experts
Danice K. Eaton, PhD, MPH  
Division of Adolescent and School Health,  
Center for Chronic Disease Prevention and Health Promotion,  
Centers for Disease Control and Prevention,  
Atlanta, GA, USA

Dear Dr. Eaton:

Thank you very much for your time. We are conducting a national study on “Adolescent dating violence: School nurse’s perceptions and practices” and you have been identified as an authority in the content which will be used in our study. Your participation as an expert for content validity assessment is vital for the success of this national study and your response is very important to us. All responses will be kept confidential.

You do not have to complete the questionnaire attached with this email. We ask that you assess the content of the questionnaire from three perspectives:

1. Please mark on the questionnaire any wording problems that need to be corrected for clarification.

2. Please add any additional items which you believe will further enhance our results.

3. Please strike any items on the questionnaire which you believe are not essential to our goal.

We hope that you will extend a professional courtesy to us and critique our questionnaire. Your response within 7 days of receiving this email/survey would be greatly appreciated. If you have any questions please feel free to contact me by responding to this email, or my supervisors at the University of Toledo- Dr. Candace Hendershot, Dr. Susan Telljohann and Dr. James H. Price at-419-530-4369. Again, thank you very much for your help!

Sincerely,

Jagdish Khubchandani, MBBS, MPH, CHES  
Research Associate  
University of Toledo Medical Center
Appendix E

Email to Inform Study Participants About the Survey Mailing
Dear First Name-

The faculty at University of Toledo is conducting a national assessment of school personnel’s perceptions of adolescent dating violence. This educational assessment has been approved by the National Assessment of School Nurses. You have been selected randomly from the NASN database to participate in this confidential and anonymous assessment.

In the next few days you will receive a cash incentive, a survey on colored paper, a cover letter, and postage paid return envelope from the University of Toledo. We request that you help us complete this national educational assessment by completing the survey and returning it back to us. Only group data will be used for the assessment and you will not be identified by your responses. This assessment will help us improve the outreach efforts taken by schools to assist victims of adolescent dating violence.

Thank you for your time and we look forward to completing this assessment with your help.

Susan K. Telljohann, HSD, CHES
Professor of Health Education
Department of Health and Rehab Services
The University of Toledo
Email- STelljo@UTNet.UToledo.Ed
Phone - 419.530.4369
Fax - 419.530.4759

Candace Hendershot, PhD, RN, BSN, NCSN
Visiting Professor of Health Education
Department of Health and Rehab Services
University of Toledo
Email- CandiLee204@aol.com
Appendix F

Cover Letter: Wave One
Dear Nurse,

You are invited to participate in the research project entitled, School nurses’ perceptions of adolescent dating violence in schools which is being conducted at the University of Toledo under the direction of Susan Telljohann, HSD, CHES. The purpose of this study is to look at the key aspects of the outreach effort undertaken by school nurses to reach children and adolescents who are victimized in a dating relationship.

To participate in this study you are being requested to complete the attached survey. The survey will take approximately 15 minutes to complete. Please complete the survey within one week of receiving it. There are minimal risks to participation in this study, including loss of confidentiality. The only direct benefit to you if you participate in this research may be that you will learn about survey research process and you may learn more about adolescent dating violence. Others may benefit by learning about the results of this research. For your time and expertise in answering this survey, we have enclosed a one dollar incentive.

Your participation and response is important to this study. All responses will be confidential and you will not be individually identified with your questionnaire or responses. Please complete the survey within one week of receiving it. Participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled and you may discontinue participation at any time without penalty of loss of benefits, to which you would otherwise be entitled. If you choose not to complete the survey, it will not affect you or your standing with the University of Toledo in anyway.

Before you decide to accept this invitation to take part in this study, you may ask any questions that you might have. If you have any questions at any time before, during or after your participation you should contact Dr. Susan Telljohann at 419-5304950 or by email stelljo@utnet.utoledo.edu. If you have questions beyond those answered by the research team or your rights as a research subject or research-related injuries, please feel free to contact Dr. Jeffrey Busch, research compliance coordinator at (419) 530-2844.

By going to the next page and completing the attached survey – you are giving your informed consent to participate in this research project.

Thank you for your time and professional courtesy with this study.

Sincerely,

Susan Telljohann, HSD, CHES
Professor of School Health
Appendix G

Cover Letter: Wave Two
Re: 2nd Request for Adolescent Dating Violence Survey

Dear School Nurse:

Thank you very much for your time! Did you receive our mailing in late June? A couple of weeks ago, you should have received a letter, a survey on colored paper, and a token cash incentive from the University of Toledo regarding: “School Personnel’s Perceptions of Adolescent Dating Violence.” This national assessment is being conducted to develop educational material for school personnel and has been approved by the National Association of School Nurses, and the American School Health Association.

Perhaps you never received the first mailing. Perhaps you misplaced the original survey or thought it was too late to send it back to us. The good news is this - it is not too late to complete the survey and return it to us! Just in case you misplaced the original survey, we have enclosed another copy for you. Completing the survey requires only 10 minutes of your time and your responses will remain anonymous and confidential.

Your participation and response is extremely important to a quality assessment!

For your convenience we have also enclosed another pre-stamped, pre-addressed return envelope. If you have any questions or concerns, please feel free to contact us @ chender5@utnet.utoledo.edu or 419-530-4369.

Please complete the survey within the next seven days. We appreciate your help! Again, thank you very much for your time and expertise!

Sincerely,

Candace Hendershot, PhD, RN, BSN, NCSN
Professor of School Health/ Health Education

Susan K. Telljohann, HSD, CHES
Professor of Health Education
Appendix H

Cover Letter: Wave Three
07/24/2010

Re: Final Request for Assistance!!!

Dear School Nurse:

Thank you very much for your time. A couple of weeks ago, you should have received a questionnaire on colored paper from the University of Toledo on Adolescent Dating Violence which was approved by the National Association of School Nurses.

To complete our national assessment which is being conducted to develop educational material for school personnel we need 27 more completed questionnaires with responses. We request that you extend professional courtesy & help us by responding to the attached questionnaire. Even if you do not routinely assist victims of Adolescent Dating Violence, we need to know this for developing educational tools.

For your convenience we have also enclosed another questionnaire and a pre-stamped, pre-addressed return envelope. Completing the survey requires only 8-10 minutes of your time. Your responses are important to us and are confidential!

Please complete the enclosed survey within one week. If you have any questions or concerns, please feel free to contact me by telephone (419) 530-4369 or email: Stelljo@utnet.utoledo.edu

We appreciate your support for this national educational assessment! Please help us!

Sincerely,

Susan K. Telljohann, HSD, CHES
FASHA Professor of Health Education

Candace Hendershot, RN, PhD, NCSN
Visiting Professor of School Health
Appendix I

Research Questions, Hypotheses, and Survey Items Matrix
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Hypotheses</th>
<th>Statistical Tests</th>
<th>Survey Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the school nurse’s perceived extent of ADV in their schools?</td>
<td>1.1-1.10</td>
<td><em>t</em>-tests</td>
<td>1 and 2</td>
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<tr>
<td></td>
<td></td>
<td>ANOVA</td>
<td></td>
</tr>
<tr>
<td>What ADV prevention activities are currently being used in nurse’s schools?</td>
<td>2.1-2.10</td>
<td><em>t</em>-tests</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ANOVA</td>
<td></td>
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<tr>
<td>What is the number of ADV victims who received assistance from a school nurse in the past 2 years?</td>
<td>3.1-3.9</td>
<td><em>t</em>-tests</td>
<td>10</td>
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<tr>
<td></td>
<td></td>
<td>ANOVA</td>
<td></td>
</tr>
<tr>
<td>Based on Stages of Change Theory what are the current practices of nurse’s schools in relation to having a protocol for responding to an ADV incident?</td>
<td>4.1-4.9</td>
<td>Chi-square tests</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tests</td>
<td></td>
</tr>
<tr>
<td>What are the school nurses perceptions of the roles of various school personnel with regards to assisting victims of ADV?</td>
<td>5.1-5.9</td>
<td>Chi-square tests</td>
<td>14</td>
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<tr>
<td></td>
<td></td>
<td>tests</td>
<td></td>
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<tr>
<td>What are the school nurses perceived barriers to assisting student victims of ADV in their school?</td>
<td>6.1-6.9</td>
<td><em>t</em>-tests</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ANOVA</td>
<td></td>
</tr>
<tr>
<td>What are school nurse’s perceived roles in relation to preventing ADV?</td>
<td>7.1-7.8</td>
<td>Descriptive</td>
<td>16</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>What is the level of knowledge of school nurses about ADV?</td>
<td>8.1-8.9</td>
<td><em>t</em>-tests</td>
<td>17</td>
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<tr>
<td></td>
<td></td>
<td>ANOVA</td>
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