2003

Project Peace Revisited: An Evaluation Of A Violence Prevention Program For East Coast Adolescents

Sophia L. Kary
Seton Hall University

Follow this and additional works at: https://scholarship.shu.edu/dissertations
Part of the Counseling Psychology Commons

Recommended Citation
https://scholarship.shu.edu/dissertations/1393
PROJECT PEACE REVISITED:
AN EVALUATION OF A VIOLENCE PREVENTION PROGRAM FOR EAST COAST ADOLESCENTS

BY

SOPHIA L. KARY

Dissertation Committee

Thomas Massarelli, Ph. D.
Olivia Lewis-Chang, Ph. D.
Ronald Kelber, Ph. D.

Submitted in Partial Fulfillment of the Requirements for the Degree
Doctor of Philosophy
Seton Hall University
2003
Acknowledgments

A special thanks to my mother and father
for instilling in me the courage
and belief that I can achieve anything...

To my sister, Nicole,
For offering a vote of confidence
and a witty comment just when I needed it...

To my sister, Diana,
for always making me laugh and smile...

To my committee:
Dr. Thomas Massarelli
Dr. Olivia Lewis-Chang and
Dr. Ronald Kelber
for taking the time to guide
and support my work...

And last, but certainly not least,
To my husband, Jason.
Your unfailing love, support and devotion
has made me realize my dreams.
My love and thanks to you always!
Dedication

To my sister Tara, my angel.
Thank you for sitting on my shoulder and whispering words of encouragement.
# TABLE OF CONTENTS

**LIST OF TABLES** ................................................................. ix

**I INTRODUCTION** ................................................................. 1

Overview .............................................................................. 1

Statement of the Problem .................................................. 5

  Brief History of School Violence ...................................... 6
  Types of School Violence .................................................. 8
  Theories of School Violence .............................................. 8
  School Violence: Ameliorating Factors .......................... 12
  The Present Study ............................................................. 17

Significance of the Study .................................................... 18

  Theoretical Underpinnings of *Project Peace* ................... 21
    Pedagogical Framework ................................................. 21
    Cognitive-Behavioral Principals and Social Learning Theory 22

Research Questions ............................................................. 24

Variables Examined ............................................................. 24

Hypotheses .......................................................................... 25

  Hypothesis 1 ................................................................. 26
  Hypothesis 2 ................................................................. 26
  Hypothesis 3 ................................................................. 26
  Hypothesis 4 ................................................................. 26
  Hypothesis 5 ................................................................. 26
  Hypothesis 6 ................................................................. 26
    Hypothesis 6A ............................................................. 27
    Hypothesis 6B ............................................................. 27
    Hypothesis 6C ............................................................. 27
  Hypothesis 7 ................................................................. 27
    Hypothesis 7A ............................................................. 27
    Hypothesis 7B ............................................................. 27
    Hypothesis 7C ............................................................. 27
  Hypothesis 8 ................................................................. 28
    Hypothesis 8A ............................................................. 28
    Hypothesis 8B ............................................................. 28
    Hypothesis 8C ............................................................. 28
  Hypothesis 9 ................................................................. 28
    Hypothesis 9A ............................................................. 28
    Hypothesis 9B ............................................................. 29
    Hypothesis 9C ............................................................. 29
  Hypothesis 10 ................................................................. 29
    Hypothesis 10A ............................................................ 29
    Hypothesis 10B ............................................................ 29
II REVIEW OF RELATED LITERATURE

Introduction........................................................................... 35
History of Violence in American Schools.............................. 36
Early Reports of School Violence.......................................... 36
The 1990's-Present.............................................................. 38
Summary of Adolescent Development.................................... 43
Physical Development......................................................... 44
Cognitive Development....................................................... 46
Emotional/Psycho-Social Development................................... 47
Abnormal Adolescent Development....................................... 48
School Climate/Environment............................................... 50
School-Based Anti-Violence Programs in the United States...... 53
A Developmental-Contextual Framework............................... 54
School-Based Violence Prevention Programs.......................... 56
Second Step........................................................................... 56
Resolving Conflict Creatively Program................................. 62
Positive Adolescent Choices Training..................................... 65
Project Peace........................................................................ 68
Hypothesized Outcomes....................................................... 72
The School Climate/Environment.......................................... 72
School Staff.......................................................................... 72
Specific Locations in the School Environment....................... 75
Peer Interactions................................................................. 77
Anger.................................................................................. 83
Anger and Gender Differences............................................. 87
Anger and Ethnic/Cultural Differences................................. 105
Anger Reduction................................................................. 118
Attitudes Toward Violence.................................................... 119
Skills and Knowledge: An Assimilation of Project
Peace Material.................................................. 127
Conflict Resolution.......................................... 129
Ethnic and Socio-Cultural Issues......................... 134
  African Americans........................................ 137
  Latino/Hispanic Americans.............................. 139
  Asian Americans........................................... 140
  Additional Ethnic and Gender Considerations......... 142
Summary and Final Rational Statement.................. 147

III METHODOLOGY........................................... 149

  Participants............................................... 149
  Procedure................................................ 152
  Research Instruments.................................... 155
    The School Climate Measure............................ 155
    The Personal Anger Scale.............................. 156
    The Attitudes Toward Violence Measure.............. 157
    The Skills and Knowledge Measure.................... 157
    The Monthly Behavior Report......................... 157
    Reliability and Validity................................ 158
  Statistical Analyses.................................... 161
  Power Analyses........................................... 162

IV RESULTS............................................... 164

  Reliability of Project Peace Measures................. 164
    School Climate Measure................................ 164
    Personal Anger Scale.................................. 165
    Attitudes Toward Violence.............................. 165
    Skills and Knowledge Measure........................ 165
    Monthly Behavior Report................................ 165
  Descriptive Statistics.................................. 166
  Hypotheses............................................... 167
    Hypothesis 1........................................... 167
    Hypothesis 2........................................... 167
    Hypothesis 3........................................... 167
    Hypothesis 4........................................... 167
    Hypothesis 5........................................... 168
    Hypotheses 6-10........................................ 169
  Gender Comparisons...................................... 169
Hypothesis 6A ................................................. 169
Hypothesis 7A ................................................. 171
Hypothesis 8A ................................................. 171
Hypothesis 9A ................................................. 171
Hypothesis 10A .............................................. 172
Ethnicity Comparisons .................................... 172
Hypothesis 6B ............................................... 174
Hypothesis 6C ............................................... 175
Hypothesis 7B ............................................... 175
Hypothesis 7C ............................................... 176
Hypothesis 8B ............................................... 177
Hypothesis 8C ............................................... 177
Hypothesis 9B ............................................... 178
Hypothesis 9C ............................................... 178
Hypothesis 10B .............................................. 179
Summary ....................................................... 179

V DISCUSSION OF RESULTS AND RECOMMENDATIONS ............ 180

Discussion of Results ...................................... 180
  School Climate .......................................... 181
  Anger ..................................................... 191
  Attitudes Toward Violence ................................ 198
  Conflict Resolution Skills ................................ 205
  Skills and Knowledge Acquisition ........................ 210
Summary and Clinical Implications ......................... 218
Recommendations for Future Research ...................... 220

References ..................................................... 223
Appendices ................................................... 250
LIST OF TABLES

Table

1. Time Line of Recent Incidents of School Violence ............... 39

2. Descriptive Statistics for Project Peace Measures and Corresponding Subtests ............................................. 166

3. Paired Two-Tailed t Tests of Project Peace Measures ........... 168

4. Descriptive Statistics for Gender Comparisons on Project Peace Posttest Measures ............................................. 170

5. Gender Comparisons of Project Peace Measures: Independent Samples t Tests ..................................................... 170


8. Descriptive Statistics for Ethnic Groups on the Posttest Project Peace Measures ............................................. 176
CHAPTER I
INTRODUCTION

Overview

The American Psychological Association defines violence as "immediate or chronic situations that result in injury to the psychological, social or physical well being of individuals or groups" (1993, p. 1). In the past, the word violence typically conjured up images of wartime casualties, gang related brawls and terrorist acts. Yet, recent violent crimes committed on school campuses have turned the media's and the nation's attention towards discovering the causes of such violent acts. The past six years have seen an increase in school shootings including: 1) the West Paduchah, Kentucky (Heath High School) incident on December 1, 1997 in which 14-year-old Michael Carneal drew a gun and took the lives of 3 of his fellow classmates, and wounded 5 others during morning prayer circle at Heath High School; and 2) the Columbine High School massacre in Littleton, Colorado on April 20, 1999 (Stephens, 2002), an event left 14 students and 1 teacher dead and injured 23 others when Eric Harris and his classmate Dylan Klebold carried out their plan to destroy their school and kill at least 500 in the process (Stephens, 2002).

School violence and its threats represent a formidable challenge to the healthy development of adolescents in the United States. A nationwide survey of 700 urban, suburban and rural school districts was conducted in the early 1990's to examine the
prevalence of violence in the schools. The study revealed that 89% of respondents including parents and educators indicated that school violence is a problem in their community (Arndt, 1994). Likewise, the National Center for Education Statistics [NCES] (2000) has reported that nearly every year, 3 million young people in the United States fall victim to crimes at school, and approximately 2 million of these incidents involve violence. According to the National Crime Victimization Survey (NCVS) (1992), adolescents ages 16-19 have the highest victimization rates in the United States (94.7 per 100,000), closely followed by adolescents ages 12-15 (92.2 per 100,000).

These statistics were also confirmed by an update of the NCVS in 2000 finding that “in 1993, 1995, 1997 and 1999, about 7 to 8 percent of students in grades 9 through 12 reported being threatened or injured with a weapon such as a gun, knife or club on school property in the past 12 months” (Rennison, 2000, p. 10).

Despite the media focus on violent acts, that is, school shootings, in our nation’s schools, school violence also includes any purposeful acts that physically or psychologically harm people and damage school property. This includes fights and vandalism (Loeber & Stouthamer-Loeber, 1998). During the late 1960’s and the early 1970’s, reports of assaults, robberies and vandalism were on the rise in U. S. schools (Riley, 2000). The incidence of violence in the schools then came to a leveling off period during the mid-1970’s and has been steadily rising since that time, peaking during the early 1990’s (U.S. Department of Health and Human Services, 2001).

A recent investigation examining the nationwide prevalence of school violence found that 21.3% of ninth graders surveyed in the United States indicated that they had been in a physical fight on school property during the course of the past academic year.
(Center for the Prevention of School Violence, 2000). These statistics highlight the idea that violence in the nation’s schools takes many forms, all of which need to be addressed in order for the school environment to be one of safety, security and learning for our youth.

The increase in school violence has lead to legal actions to ameliorate this national problem. The Safe Schools Act of 1994 (P. L. 103-227) demonstrates the government’s recognition of the threat of violence to our nation’s youth by allotting funds and assistance to develop programs to ensure the safety of our schools. Similarly, legislation at the state level has sought to deal with the threat of school violence and to create safe school environments for the nation’s youth. The Safe Schools Against Violence in Education Act (Project SAVE) was signed into law by New York Governor George Pataki affording “teachers and other school personnel greater opportunities to be involved in the development of school district policies and procedures concerning safe schools” (New York State United Teachers, 2001).

As a result of the rise in school violence, there has been a focus on discovering the causes and outcomes of violence and aggression in American youth (Yell & Rozalski, 2000). It has lead to discovering and instituting methods and mechanisms for ameliorating this crisis. Studies have indicated that violence creates an academic environment that threatens the ability of teachers to teach and students to learn (Cirillo, Pruitt, Colwell, Kingery, Hurley & Ballard, 1998; Hoagwood, 2000). Thus, research has focused on discovering school-based strategies to cope with school violence (Bosworth, Espelage, & Dubay, 1998; Casella, 2000; de Anda, 1999; Frey, Hirschstein, & Guzzo, 2000). For example, some schools are instituting methods for dealing with and managing
school violence including increased school security, smaller classes, the wearing of uniforms, zero-tolerance policies and the institution of violence prevention programs (U.S. Department of Health and Human Services, 2001; Hamburg, 1998).

Violence prevention strategies are often based on theoretical or ideological assumptions, in the absence of objective, scientific evidence (Cornell, 1999). A recent review of the literature demonstrates a lack of statistical replication and validation of violence prevention programs (Leff, Power, Manz, Costigan, & Nabors, 2001). While the reasons for the paucity of outcome research range from the high cost of funding projects to the time and labor intensiveness required in such studies, empirical data is needed before demonstrating program effectiveness in an effort to comprehensively address violence in the schools and reduce the number of school violence incidents (Flannery, 1998). The implementation of programs demonstrates preventive efforts by administrators and educators to address school violence. However, additional proactive methods whose efficacy has been demonstrated are needed. Schools often provide violence prevention education to their students in a cursory manner; doing ‘something’ instead of ‘doing nothing.’ Yet, while these efforts appear proactive there is little evidence to support the efficacy of these prevention strategies. Without empirical validation of violence prevention programs and prevention efforts, efficacy cannot be accurately measured (Flannery, 1998) and the issue of school violence cannot be thoroughly addressed.

The national government has recently addressed the need for meaningful evaluation of violence prevention programs and the necessity for outcome research. The 107th Congress signed into law the No Child Left Behind Act of 2001 (P. L. 107-110).
Title IV of this act, 21st Century Schools, addresses the issue of school violence and the need for prevention programs in the schools. Under this act, schools are required to provide violence prevention education to students in the form of organized programs. The government will be providing funding for program implementation. Additionally, this act addresses the need for meaningful evaluation and data collection requiring that by January 1, 2003 and every 2 years thereafter, schools are required to furnish incidence and prevalence rates of school violence and outcome measures of the effectiveness of the intervention programs implemented. Failure to comply with this act will result in the removal of funds, fines and a judicial review (P. L. 107-110).

Statement of the Problem

School violence represents a public health concern that must be addressed as it compromises the physical, emotional and social health of students. Violence on school campuses is no longer an issue exclusive to urban locales where gangs, weapons and violence are the norm in neighborhoods and schools. An increase in school violence has been occurring in more suburban areas as well (Anderson et al., 1999). Additionally certain crimes including witnessing classmates being beaten, being threatened and being slapped are even more likely to occur in suburban towns and small cities than in large, urban schools (Cirillo et al., 1998).

Where school has traditionally been viewed as an environment created for educating our children, the recent increase in violent crimes in the hallways and playgrounds of U.S. schools has posed a threat to the safety of the academic environment. As such, attention and research needs to direct its attention to discovering the causes of
school violence, discover methods, programs and practices for making schools safe for children and adolescents.

Brief History of School Violence

From 1999-2000, school shootings in the United States killed at least fourteen people and wounded more than forty (Grapes, 2000). The tragic events of Pearl, Mississippi; West Paducah, Kentucky; Jonesboro, Arkansas; and Springfield, Oregon have become all too familiar. Yet, violence in the schools is not a recent phenomenon. The first high-profile school shooting occurred on January 29, 1979 when Brenda Spencer, 16, opened fire on the grounds of the Grover Cleveland Elementary School in San Diego, California (Grapes, 2000). After using a .22-caliber sniper rifle given to her by her father for Christmas, the seemingly ‘good kid’ killed the school’s principal and custodian, and wounded one policeman and eight young students. When she was questioned as to her motives for the vicious attack, Spencer replied, “I don’t like Mondays. This livens up the day” (Grapes, 2000).

A similar event occurred on March 2, 1987 in Missouri when 12-year-old Nathan Ferris became tired of his classmates teasing for his pudgy, overweight appearance. He warned a classmate of his plans, but no one expected Nathan to pull a pistol and kill a classmate when the teasing ensued (Grapes, 2000). In the end, Nathan turned the gun on himself resulting in the loss of two young lives.

Monday, September 26, 1988 started like any other day in the Oakland Elementary School in the suburban town of Greenwood, South Carolina. Children were milling about the cafeteria during the lunch period anxiously awaiting recess when 19-year-old James William Wilson, Jr. from the local high school opened fire in the cafeteria
killing an 8-year-old girl and wounding eight other children with a 9-round .22 caliber pistol. He then went into the girls' bathroom to reload his gun when he was tackled by the Physical Education teacher. The teacher was shot in the hand and mouth while attempting to stop James' rampage. He quickly escaped and entered a third grade classroom wounding six more students before being apprehended by the police (Grapes, 2000).

Throughout the 1990's, there were additional reports of violent crimes occurring on school grounds. During 1998 alone, 2.7 million 12 to 18-year-olds were the victims of school crimes, including 252,700 non-fatal serious violent crimes (NCES, 2000). The latter half of the 1990's also produced the tragic events of Pearl, Mississippi; West Paducah, Kentucky; Jonesboro, Arkansas; Springfield, Oregon; and Littleton, Colorado. Reports (NCVS, 1992; School Violence Resource Center, 2001; U. S. Department of Health and Human Services, 2001) have indicated that trends in school violence and school crime are beginning to show signs of stabilization. Yet, the national concern over the safety of the school environment has reached epic proportions. Research examining the types of school violence, theories of school violence and methods for addressing school violence has become a paramount issue in government, mental health and public policy (Grapes, 2000; National Crime Victimization Survey, 1992; U. S. Department of Health and Human Services, 2001). It seems as though the majority of the surveys and research are seeking the same goal: creating a safe school environment while seeking to discover the causes of school violence.
Types of School Violence

Although the majority of reported and publicized violence on school campuses across the nation involves the use of guns and weapons, school violence can take many different forms. Violence on school campuses ranges from bullying and verbal threats, to physical assaults and the use of weapons. A review of existing literature reveals that school violence encompasses a broad range of definitions. In a statement attempting to define school violence, the Center for the Prevention of School Violence expressed the need for examining violence in the schools on a continuum that begins on one end with behaviors including put downs and trash talking and culminates on the other end with multiple murder incidents (CPSV, 2000). Based on this continuum, CPSV released the following definition of school violence: "...any behavior that violates a school's educational missions, climate of respect or jeopardizes the intent of the school to be free of aggression against persons or property, drugs, weapons, disruptions, and disorder" (2000, p. 2). This comprehensive definition has been endorsed by the National Criminal Justice Reference Service and the Surgeon General (U. S. Department of Health and Human Services, 2001), and serves as a means of developing a broad lens through which this issue can be evaluated by public policy researchers, health researchers and educational researchers alike.

Theories of School Violence

It cannot be refuted that violence on school campuses comprises the safety of the academic environment. When threats of harm are present, students' ability to concentrate and learn is affected, as is their socio-emotional health. Secondary to the increase in school violence in recent years, many researchers have set out to examine the causes and
outcomes of these violent acts and to discover ways to ameliorate this public health concern (APA, 1993; Egendorf, 2001; Garbarino, 2000; Grapes, 2000). As discussed in the section above, a number of definitions of and types of school violence exist. Similarly, there are a number of theories that attempt to discover the underlying causes of school violence.

At the Children’s Policy Forum, Elliot (1994) reported that school violence can be understood as a function of several different contexts: 1) the family context, 2) alcohol, drugs, weapons and firearms, and 3) the school and peer context. Within the context of the family, weak family bonding, ineffective monitoring and supervision, exposure to and reinforcement of violence in the home, and the acquisition of expectations, attitudes, beliefs and emotional responses that support or tolerate the use of violence are likely to affect a child’s early learning experiences in a group context. In addition, research suggests that the absence of effective social bonds and controls, coupled with a failure of parents to teach conventional norms and values, puts children at risk for later violent behaviors (Elliot, 1994; Garbarino, 1999).

Researchers have implicated violence in the media (television and music alike) as a factor contributing to school violence (Bennett, 1999; Elliot, 1994). Television, in particular, has become the ‘third parent’ in many American households where both parents work outside the home (Bennett, 1999). It has been posited that these media sources not only demonstrate how to be violent, but also provide a desensitization to violence and rationalizations for such immoral behavior (National Stop Youth Violence in America, 2001).
The use of alcohol and drugs by adolescents has also been implicated in contributing to the rise in school violence (White, 1997). While alcohol is clearly implicated in violent behavior, the exact mechanism has not yet been established. It appears as though there is a relationship between the arousal effects of alcohol and violent behavior (Bushman, 1997). The cognitive effects of alcohol may motivate violence, as alcohol has been found to inhibit the cues that normally control behavior (reduce fear of retaliation and rule breaking), increase arousability, decrease the ability to perceive threat in social situations, interfere with communication and interpersonal interactions, alter one’s sense of self and intensify emotional reactions (Bushman, 1997; White, 1997). It has been postulated that the arousal expectations produced by alcohol account for the relationship between alcohol use and aggression (White, 1997). Thus, it is possible that adolescents may behave aggressively when they are intoxicated because of these expectations.

The effect of marijuana and opiate drugs actually appears to inhibit violence, although withdrawal may precipitate an increased risk of violence (Elliot, 1994). The accessibility of these substances to children and youth presents an area of concern among parents, educators, public policy makers and others who are involved in the lives of our nation’s youth. Addressing substance use and abuse must continue to be the focus of research and programmatic development as a means of contributing to ameliorating youth violence.

Focus and attention must also be given to the proliferation of weaponry and guns that exist in our society. The Guns Free Schools Act (1994) represents a monumental legislation addressing the accessibility of firearms and the detrimental effects their
possession and possible use by students has on the safety of the schools. This legal
docket stipulates that any schools receiving funding through the Improving America’s
Schools Act (1994) pass laws mandating that school districts expel, for not less than one
year, any student caught in possession of a firearm on school grounds. Continued legal
actions need to be taken to ensure that students do not have access to guns, while the
accessibility and availability of other weapons must also be addressed.

The school environment has its own potential for generating conflict, frustration
and violent responses to conflictual interpersonal interactions (Wheeler & Stomafay-
Stitz, 2000). During junior and senior high school, a clear adolescent status hierarchy
emerges, and much of the violence at school is related to competition for status and
status-related confrontation (Kachur et al., 1993). The combination of new conflicts and
reduced levels of monitoring and supervision in these contexts increases the likelihood
that violence will emerge in response to discord (Espelage, Bosworth, & Simon, 2000).

One of the strongest and most immediate causes of the actual onset of serious
violent behaviors is the involvement with a delinquent peer group. This must not be an
involvement with ‘gangs.’ Any group that views control and power as a means for
commanding respect is likely to develop interpersonal relationships that elicit aggressive
and violent behaviors (Schonert-Reichl, 1999). In these groups, violence is modeled,
encouraged, and rewarded; justifications for disengaging one’s moral obligation to others
are taught and reinforced (Huff & Trump, 1996).

From the information presented in this section, there are a variety of theories that
have attempted to uncover the causes of school violence. The data suggests that even
with all we know, what we do not know is greater than what we do know. This indicates
that there may be other factors that influence the development of youth violence (Esterbrook, 1999) and highlights the importance and the need for continued research and program development to address the issue of violence in the schools.

School Violence: Ameliorating Factors

School violence is all encompassing, affecting the social, emotional and academic growth of students. As a means of coping with the issue of school violence and securing the safety of the nation’s youth, public policy makers, researchers and educators have begun to develop policies and programs aimed at preventing school violence (Greenberg & Kusche, 1993; de Anda, 1999; Frey, Hirschstein, & Guzzo, 2000; P. L. 107-110). Strategies include school-wide discipline plans, social skills training, violence prevention and conflict resolution programs, and parent training programs (Yell & Rozalski, 2000). It has been demonstrated that the school environment is a place that may contribute to adolescent violence (Elliot, 1994) and one where students spend the majority of their time during the day. Therefore, it follows that schools are a logical and practical place to address school violence and institute violence prevention programs.

Recent reviews have demonstrated that rigorous prevention practices can reduce later youth involvement in a number of behaviors including premature sexual activity, substance abuse and criminal activity (Cornell, 1999; Leff et al., 2001). A meta-analysis of prevention programs including behavioral programs, interpersonal skills training and multiple services programs were found to reduce violent recidivism rates between 20 and 40 percent (Lipsey, 1999). Subsequently, the development of violence prevention programs has proliferated in recent years to address school violence.
While program development is important, program efficacy is of greater importance (Lipsey, 1999). Merely addressing the issue of violence in the schools by providing students with education and training is not sufficient; the effectiveness of interventions must be assessed to prevent further violence. The Office of Juvenile Justice and Delinquency Prevention has recognized this need and has partnered with the Center for the Study and Prevention of Violence to provide schools and communities with outcome research demonstrating the effectiveness of violence prevention programs (Mihalic, Irwin, Elliott, Faggan, & Hansen, 2001). The researchers examined over 500 violence prevention programs and found that only 11 programs provided sufficient quantitative data to document effectiveness including large sample size, quasi-experimental designs, small attrition rates, and replication studies (Mihalic et al., 2001). The researchers concluded that while no strategy is effective for all youth or all settings, the need for programs that demonstrate effectiveness in diverse settings (urban, suburban and rural areas) and with diverse populations (different socio-economical, racial and cultural groups) is needed (Mihalic et al., 2001). Similarly, programs that address the differing developmental needs of males and females, and ethnically diverse populations fail to be adequately evaluated statistically (Lipsey, 1999; Mihalic et al., 2001).

It is well established that the developmental processes of adolescence are experienced differently by males and females. Recent studies of early versus late maturation have confirmed previous findings, indicating that the impact of the timing of puberty differs between boys and girls (Steinberg & Morris, 2001; Williams & Dunlop, 1999). Boys who mature at later ages have relatively lower self-esteem and stronger feelings of inadequacy, whereas early-maturing boys are more popular and have more
positive self-images (Petersen, 1985). However, early-maturing boys are at a greater risk for delinquency and are more likely than their peers to engage in antisocial behaviors including drug and alcohol use, truancy and sexual activity (Williams & Dunlop, 1999). This increase in risk-taking behaviors is likely due to the early-maturers’ interactions and friendships with older peers (Steinberg & Morris, 2001).

Research on the timing of puberty among females has also supported earlier studies indicating that early-maturing girls experience more emotional problems, lower self-esteem, and higher rates of depression, anxiety and disordered eating (Ge, Conger, & Elder, 1996). These effects are particularly strong in Western societies where cultural beliefs about attractiveness emphasize thinness (Steinberg & Morris, 2001). Like early maturing boys, early-maturing girls are more popular, but they are also more likely to become involved in delinquent activities, use drugs and alcohol, have problems in school and experience early sexual intercourse (Flannery, Rowe, & Gulley, 1993). It has also been found that early-maturing females spend more time with older adolescents, particularly older boys, and that these relationships have a negative influence on their adjustment (Silbereisen, Petersen, Albrecht, & Krache, 1999).

Similarly, research in the fields of aggression and violence has demonstrated gender differences in the experience and expression of anger, aggression and violence. Utilizing the results from the 1997 Youth Risk Behavior Surveillance System Survey, Ellickson and McGuigan (2000) found that 37% of 4300 high school students nationwide engaged in a physical fight during the previous school year, with prevalence rates for local school-based surveys varying between 27% and nearly 50%. Male students were nearly twice as likely as female students to have been in a physical fight (46% versus
26%). However violent behavior and violent reactions to conflictual situations appear to be increasing for female adolescents. The NCVS (2001) reported that between 1997 and 1998 there was a 52% increase in violent crimes committed by girls. Additionally, more than 10% of young female adolescents in grades 7, 9 and 11 in large, suburban school districts reported such high risk behaviors as fighting, substance use, and carrying weapons to school within a 30-day period (NCSV, 2001). These statistics highlight the importance of the need for continued research examining gender differences as they related to school violence. Similarly, examining the differential effects of violence prevention programs on adolescent males and females needs to be addressed to provide appropriate violence prevention education to these students.

Ethnic differences with regard to violence prevention are virtually non-existent in the current body of literature. Investigations of ethnic differences and socioeconomic diversity within the adolescent population are just beginning to emerge (McLoyd & Steinberg, 1998; Steinberg & Morris, 2001). While there is agreement among researchers that the fields of social science can no longer ignore the ethnic and socioeconomic differences that exist among this population, many unresolved issues about how to best incorporate these factors into empirical research exist (McLoyd & Steinberg, 1998). First, much of the research that examines ethnic minority and disadvantaged adolescent populations continues to overemphasize the problematic features of adolescence, delinquency, drug and alcohol use, school failure, and unemployment, and underemphasize the normative aspects of adolescent development in minority groups (Steinberg & Morris, 2001).
Second, the literature to date provides little agreement as to which guiding
principles or theoretical frameworks would best advance the knowledge base concerned
with the development of ethnic-minority adolescents (McLoyd & Steinberg, 1998). A few
of the issues that have been addressed in the literature include the difficulties researchers
face in disentangling the effects of race, ethnicity, immigration status and social class;
whether certain constructs and measures are equivalent across different minority groups;
the importance of qualitative versus quantitative research methods in examinations of
different adolescent subgroups; and the use and misuse of comparative models (Steinberg
& Morris, 2001). In addition, the majority of the work that includes diversity in research
designs is not developmental in nature. This omission fails to examine the interaction of
cultural and developmental processes in ethnically diverse adolescent populations.

Third, researchers have tended to gloss over important distinctions within broader
categories of ethnicity in studies examining adolescents. Differences among and between
groups is often overlooked, for example, Korean, Vietnamese, and Indian youth (all
generally classified as Asian), among Mexican, Puerto Rican, and Cuban youth (all
generally classified as Hispanic), or among adolescents who are recent immigrants versus
their peers who are not (Fuligni, 1997; Greenberger & Chen, 1996; Steinberg & Morris,
2001).

From the information presented above, the literature to date has failed to discover
the best theoretical framework from which to examine cultural differences with regard to
adolescent development. Until this is done, the differential effects of violence prevention
programs across minority groups cannot be evaluated. Similarly, adequate research
examining normative adolescent development between and within ethnic groups is
needed to adequately address the developmental, social and emotional needs of these
groups particularly as they relate to the prevention of school violence.

The Present Study

In an attempt to contribute to a gap in the existing body of literature related to
violence prevention programs, the present study will examine the use and efficacy of
de Anda’s (1999) Project Peace: A Safe Schools Skills Training Program for
adolescence.

Prevention programs work directly to reduce the potential for violent
confrontation among youth in the schools by teaching methods to (1)
control the emotions that lead to escalation of conflict, (2) develop
alternative nonviolent strategies for managing everyday problems and
high-risk situations, and (3) change youths’ attitudes about the
acceptability of violence as a mode of interacting with peers. (de Anda,
1997, p. 1)

Project Peace was designed “to reduce aggressive and violent behavior by expanding the
adolescent’s positive coping repertoire, including related physiological, cognitive, and
behavioral responses” (de Anda, 1997, p. 1). It is a 10-session instructional program that
also includes an additional review and culmination session. The program was originally
developed for adolescents in grades 9 through 12 in urban Los Angeles, California. The
ethnicity of the adolescents who participated in de Anda’s (1997) original study were
predominately Latino (61.1%, n = 96) and African American (35%, n = 55). In addition,
two students identified themselves as American Indian (1.3%), and four (2.5%) identified
themselves as “other.”
According to de Anda (personal communication, August, 1, 2002), Project Peace was developed as part of a federally funded program that was taking place in an ethnically diverse Los Angeles high school to develop a violence prevention program designed from a public health perspective to address the issue of school violence. The present study seeks to examine the efficacy of Project Peace as a violence prevention/conflict resolution program with New Jersey ninth grade students. Additionally, gender and ethnicity variables will be examined as there is a paucity of research that considers these demographic characteristics as they relate to school violence. The present research seeks to add to the existing body of literature and provide outcome research where it is lacking.

Significance of the Study

Although school violence has often been associated with impoverished inner-city schools, it has moved to suburban and rural schools (Sleek, 1998). In the past decade, the violence on school grounds has become more frequent and more violent, and with occurrences in equal proportions in urban, suburban and rural communities (Elliot, Hamburg & Williams, 1998). As such, researchers have sought to design a violence prevention program that addresses the public health concern of school violence. To date, one unified program has yet to be developed or evaluated that demonstrates effectiveness with a variety of adolescent populations. A review of the literature by this researcher demonstrated that violence prevention programs that systematically examine the effects of gender and ethnicity on outcome variables are missing from the literature. The present investigation serves to add to the existing body of literature on school violence. The outcomes of this violence prevention program, Project Peace, for adolescents will be
discussed providing a critical review of the original research. The present study will also examine gender and ethnic differences with regard to violence prevention skills as there is a paucity of literature to date that considers these variables.

In no way does the present research claim to support or refute the efficacy of Project Peace given the inherent limitations found in the original research. However, it will provide additional data to the paucity of outcome research on school violence prevention programs. The present research will also address issues of generalizability of violence prevention programs so that future researchers can move in a more empirically based direction.

The sample of students utilized in this study who participated in Project Peace consists of a group of ninth graders from a suburban, middle class, northeast New Jersey high school. The teachers and administrators of the school had expressed concern regarding the nationwide increase in violent acts on school campuses. In addition, they had witnessed an increase in school violence on the grounds of their own school. Violence was occurring in the forms of verbal altercations and school-ground fights. For the 1999-2000 academic year, there was an average of 16 student suspensions up from an average of 14.1 during the 1998-1999 academic year (New Jersey Department of Education [NJDOE], 2002). No other formal programs had been implemented by this school or district to address school violence with the exception of "spontaneous classroom discussions" (J. Runte, personal communication, April 24, 2001). Just prior to the administration of Project Peace to this sample, four students were killed in a car accident (two juniors and two seniors) resulting in many feelings of depression, anger and victimization among the students. The accident occurred when the driver of the car
attempted to beat a train at a railroad crossing. This incident took place during the Christmas break just before classes were to resume in 2001.

The Northeast High School (grades 9 through 12) from which the Project Peace sample was drawn had a population of 1420 students during the 2000-2001 academic year. The average class size was 23 students, with student-faculty ratio of 11:4. This is a relatively ethnically homogeneous school with approximately 75% of the student body identifying themselves as “white/ Caucasian.” Approximately 5% of the student body identify themselves as African Americans, 8% identify themselves as Asian Americans, and 7% identify themselves as Latinos and Hispanics. The remaining 5% of the students identify themselves as “other.” The school district reportedly spends an estimated $951 per pupil on student support services including, but not limited to, personal aides and study groups, and computers with internet access in all classrooms (NJDOE, 2002).

The sample of students who participated in Project Peace was all in the ninth grade. Research has indicated that the early and mid-adolescent periods (ages 12-16) represent developmental periods in which aggression and violence are more likely to occur (Cairns, Cairns, Neckerman, Ferguson, & Gariety, 1989; Lindeman, Harakka, & Keltikangas-Jarvinen, 1997). In addition, the Director of Student Personnel Services had received a grant from the school district to be used with the ninth graders to “address a current public health issue” (Runte, J. W., personal communication, April 20, 2001). The district was also responding to state laws mandating the implementation of violence prevention strategies to address the issue of violence in the schools (Yell & Rosalski, 2000). The school personnel made the decision to implement Project Peace as a means of providing the students with violence prevention and conflict resolution skills training.
The socio-emotional and developmental needs of the adolescent population, the district's pre-established health education class for this age group, sufficient funding and legal responsibilities justified this decision.

*Theoretical Underpinnings of Project Peace*

Project Peace is grounded in several theories and frameworks. This section serves to explain the rationale behind de Anda's (1997) scale development and to present the basis for the hypotheses of the present study.

*Pedagogical framework.*

Project Peace is based on a model of instruction that incrementally presents skills and concepts in a sequential manner such that each session builds upon and incorporates previous sessions (de Anda, 1999). The generalizability and applicability of the knowledge and skills taught to the students are made apparent by having them draw upon and report experiences from their own lives. This teaching/learning process has its roots in the pedagogical principles of Task Analysis (Gagne, 1970). Task Analysis necessitates that learning goals be broken down into learning tasks and further down into smaller component parts. This represents a hierarchical approach to teaching and learning that assures that all prerequisite concepts and skills are mastered prior to being integrated into subsequent steps.

In keeping with the pedagogical principles of Task Analysis, De Anda (1999) reports that Project Peace includes the following features:

1. Learning objectives listed at the beginning of each session state the specific skills and knowledge the students will acquire.
2. Motivational activities are included to stimulate and maintain students’
interests in the learning task at hand and to reduce the incidence of disruptive
or distracting behavior that might otherwise interfere with the learning
process.

3. Each session begins with a review of the major concepts presented in the last
session, and a logical transition is provided to the new material.

4. New concepts and skills are illustrated with specific, concrete examples.

5. Students demonstrate and improve their understanding of the concepts and
skills (learning tasks) presented by participating in activities based on
examples provided by the instructor.

6. Students apply the concepts and skills they have learned to relevant examples
they have generated from their own lives to help them generalize the use of
appropriate nonviolent strategies to situations outside the classroom. This
step also is critical because of the variety of situations that students must deal
with in their particular environments. For example, students participate in
creating a list of alternative nonviolent actions (consistent with their cultural
milieu) that can be used in response to anger-eliciting situations or events.

(triggers) (p. 3)

*Cognitive-Behavioral principles and Social Learning Theory.*

It is of importance to examine some of the basic principles of the cognitive-
behavioral and social learning theories and their approaches as they relate to Project
Peace. Generally speaking, cognitive-behavioral theory stems from a rational
epistemological viewpoint: “a purposeful attempt to preserve the positive features of the
behavioral approaches, while also working to incorporate into the model the cognitive activity and information-processing factors of the individual" (Kendall & MacDonald, 1993, p. 387).

An underlying premise presupposes that behavior is learned. Changing behavior requires the acquisition of new behaviors to expand an individual’s behavioral repertoire. Another premise states that thought processes mediate what a person feels and how she or he behaves. In other words, a person’s feelings and actions stem from the thinking process that is initiated by a particular stimulus, event or situation. Bandura (1995) suggests that “People’s levels of motivation, affective states, and actions are based more on what they believe than on what is objectively the case” (p. 2). While Beck (1976, 1984) asserts that one’s cognitions (thoughts and imagery) determine emotions, behaviors, and physiological reactions, and that cognitive restructuring can alter the way in which one perceives and reacts to his or her environment.

Project Peace incorporates activities that assist students in recognizing and examining the thoughts that lead to anger (an emotion). The program also includes activities aimed at correcting cognitive distortions that may, for example, “lead a person to perceive even minor situations as personal affronts or threats” (de Anda, 1997, p. 5).

Project Peace also includes the four methods Bandura (1995) identified as being involved in developing a strong sense of self-efficacy: 1) vicarious experiences, 2) social persuasion, 3) mastery experiences, and 4) enhancement of physiological and emotional states. From a social learning perspective, Bandura (1973, 1977, 1986) has argued that the external environment contributes, in large part, to acquiring and maintaining aggression. Children and adolescents learn from role models, including adults and peers,
to use aggressive means to achieve their goals. Combined with Meichenbaum’s (1985) stress inoculation methods (1-physiological arousal reduction; 2-altering an individual’s self-statement in situation evaluation; 3-employing coping behaviors), Project Peace utilizes activities and approaches that require students to generate alternative responses to situations as a means of expanding their behavioral repertoire.

Research Questions

School violence is an issue of concern for all communities. It affects both genders, and diverse ethnic groups. The information presented thus far has demonstrated the impact of school violence on the development of adolescents. The lack of systematic research investigating the efficacy of violence prevention programs has done little to discover primary means of decreasing, if not eliminating, the incidences of violence on school grounds. Similarly, gender and ethnic differences with regard to school violence and the effects of prevention programs on these differing groups has be underexamined in the literature. In an effort to contribute to the body of literature on school violence, the present study seeks to examine the use and efficacy of Project Peace. Specifically, the questions to be addressed are as follows:

1. Does Project Peace represent an effective violence prevention tool for adolescents in the ninth grade in northeastern New Jersey?

2. How do the demographic variables of gender and race/ethnicity affect participation in Project Peace?

Variables Examined

The independent variables that will be examined in this study are the students’ grade (ninth), gender and ethnicity (including Caucasians, African Americans, Asian
Americans and Latinos/Hispanics). The dependent variables are the participants’ scores on the measures that examine: a) the school climate, b) anger, c) attitudes toward violence, d) skills and knowledge acquisition and e) violent behaviors. These variables will be examined by the School Climate Measure, the Personal Anger Scale, the Attitudes Toward Violence Measure, the Skills and Knowledge Measure and the Monthly Behavior Report respectively.

Hypotheses

School violence represents an important issue in the fields of psychology and education. The healthy psycho-social development of children and adolescents is compromised when the threat of violence on school grounds is present. The literature presented heretofore demonstrates that the rates of school violence are increasing while the discovery of effective prevention tools has yet to be uncovered. While significant progress has been made in examining the causes of school violence, empirical evidence supporting the use of one prevention tool or method over another has yet to be found. Likewise, the differential effects of gender and ethnicity as they related to school violence are virtually absent from the literature. The present study seeks to provide information to the existing body of literature on school violence examining the use of Project Peace as a violence prevention tool while examining the effects of gender and ethnicity on outcome variables. To answer these research questions, the specific hypotheses examined in this research study include the following:
Hypothesis 1

There will be a significant increase in the sense of safety in the school environment among program participants as demonstrated by an increase in the scores on the School Climate Measure from pretest to posttest.

Hypothesis 2

There will be a significant increase in the students' level of anger control as demonstrated by an increase of scores on the Personal Anger Scale from pretest to posttest time.

Hypothesis 3

There will be a significant increase in the students' scores from pretest to posttest on the Attitudes Toward Violence Measure.

Hypothesis 4

There will be a significant increase in the students' scores on the Skills and Knowledge Measure from pretest to posttest time.

Hypothesis 5

There will be a statistically significant decrease in the students' scores on the Occurrence of Violent Behavior items of the Monthly Behavior Report after program completion.

Hypothesis 6

There will be significant differences among demographic factors on the School Climate Measure.
Hypothesis 6A.
At posttest, female and male participants’ scores on School Climate
Measure will be significantly different.

Hypothesis 6B.
At posttest, Asian American, African American and Latino participants’
scores on the School Climate Measure will be significantly different from
Caucasian participants’ scores.

Hypothesis 6C.
Among ethnic minority participants, African American and Latino
participants’ scores on the posttest School Climate Measure will be significantly
different from Asian American participants’ scores.

Hypothesis 7
There will be significant differences among demographic factors on the Personal
Anger Scale.

Hypothesis 7A.
At posttest, female and male participants’ scores on the Personal Anger
Scale will be significantly different.

Hypothesis 7B.
At posttest, Asian American, African American and Latino participants’
scores on the Personal Anger Scale will be significantly different from
Caucasian participants’ scores.

Hypothesis 7C.
Among ethnic minority participants, African American and Latino
participants' scores on the posttest Personal Anger Scale will be significantly different from Asian American participants' scores.

*Hypothesis 8*

There will be significant differences among demographic factors on the Attitudes Toward Violence measure.

*Hypothesis 8A.*

At posttest, female and male participants' scores on the Attitudes Toward Violence Measure will be significantly different.

*Hypothesis 8B.*

At posttest, Asian American, African American and Latino participants' scores on the Attitudes Toward Violence Measure will be significantly different from Caucasian participants' scores.

*Hypothesis 8C.*

Among ethnic minority participants, African American and Latino participants' scores on the posttest Attitudes Toward Violence Measure will be significantly different from Asian American participants' scores.

*Hypothesis 9*

There will be significant differences among demographic factors on the Skills and Knowledge Measure.

*Hypothesis 9A.*

At posttest, female and male participants' scores on the Skills and Knowledge Measure will be significantly different.
Hypothesis 9B.

At posttest, Asian American, African American and Latino participants' scores on the Skills and Knowledge Measure will be significantly different from Caucasian participants' scores.

Hypothesis 9C.

Among ethnic minority participants, African American and Latino participants' scores on the posttest Skills and Knowledge Measure will be significantly different from Asian American participants' scores.

Hypothesis 10

There will be significant differences among demographic factors on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report.

Hypothesis 10A.

At posttest, female and male participants' scores on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report will be significantly different.

Hypothesis 10B.

At posttest, Caucasian and Asian American participants' scores on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report will be significantly different from Latino and African American participants' scores.
Definition of Terms

*School Violence*

Conceptually, definitions of this phrase range from very limited (relating only to the use of guns in school) to very extensive, including all youth misconduct and the many community and societal influences on such behavior. The present study will operationally define school violence according to the Center of the Prevention of School Violence definition: “any behavior that violates a school’s educational mission or climate of respect or jeopardizes the intent of the school to be free of aggression against persons or property, drugs, weapons, disruptions, and disorder” (CPSV, 2000, p.12).

*Adolescent*

Conceptually, “adolescence” represents a stage of human development that takes place between puberty and early adulthood. The specific age of puberty and adulthood varies from person to person. Caplan (1974) divided adolescence into three age related stages: early adolescence (12-14), middle adolescence (15-16) and late adolescence (17-19). Based on the sample examined in this study, an adolescent will be operationally defined as a student in the ninth grade. The ages of the sample were not controlled for as all students who participated in Project Peace in this school ranged in age from 14 to 16 years; the early and middle adolescent years.

*School Climate/School Environment*

Operationally defined by de Anda (1997) as the school campus including the physical environment, and the interactions with staff, teachers and peers.
Caucasian Americans/Whites

Conceptually defined in this study to refer to individuals whose “ethnic cultures are of the smaller (especially) White Northern and Western European ethnic groups who settled in this country (Helms & Cook, 1998, p. 22). They include individuals whose ancestry are English, Scotch, German, Irish, Dutch, French/French Canadian, Italian, Polish and Native American” (Helms & Cook, 1998, p. 22).

African-Americans

Conceptually defined in this study as individuals of African descent who represent a diverse group “in terms of geographic origins, age, acculturation, religious background, skin color, and socioeconomic status (Hines & Boyd-Franklin, 1996, p. 66).

Asian Americans

Conceptually defined as “a collective set of Asian Americans and Pacific Islander American populations” (Lee, 1996, p. 227).

Hispanics/Latinos

In this study, the terms Hispanic and Latino will be used interchangeably: “Hispanic or Latino are adjectives used to describe people who come from different cultures and sociopolitical histories. They are Cubans, Chicanos, Mexicans, Puerto Ricans, Argentinians, Columbians, Dominicans, Brazilians, Guatemalans, Costa Ricans, Nicaraguans, Salvadorians, and all other nationalities that comprise South America, Central America, and the Carribbean” (McGoldrick, Giordano, & Pearce, 1996, a,b, p. 142).
Limitations

1. The measures utilized in Project Peace have not been found to have statistical reliability and validity (de Anda, 1997, 1999). Therefore, the findings of the present study cannot be generalized to the larger population.

2. The long-term effects of Project Peace are yet to be determined demonstrating the need for follow-up studies to examine the amount of retention of information and behavioral practices among students who have completed this training program.

3. The Hawthorne Effect may have contributed to the findings of the present study. This threat to external validity can be defined as “the effect of doing the study or evaluation, or [the participants response to] being observed or cared for” (Adair, 1984, p. 334). Interpretation of the findings of the present study should be done with caution as merely participating in Project Peace could have affected the students’ responses such that any differences found were not due directly to intervention, but due to their participation in this program.

4. The present research utilizes archival data. Therefore, there was no random assignment of subjects compromising both internal and external validity, and generalizability of the results.

5. Historical Event: A car accident that claimed the lives of four of the high school’s junior/senior students occurred one month to the administration of Project Peace. The accident was the result of the student’s running a railroad crossing and colliding with a train. This event represents a threat to the internal validity of the results as this extraneous event correlates with the dependent variables examined. The history of the students who participated in Project Peace may have confounded the results.
6. The data used in the present study was archival and the research was not informed if there were any classified students who participated in Project Peace. This participation of students with special needs in the study may have had an effect on the results that were not accounted for in the study design.

7. de Anda reported that the materials and measures of Project Peace “were created to be read and understood by children as young as the third grade” (personal communication, 1 August 2002). However, no standardized method of determining readability was reported by the original researcher.

Summary

This chapter introduced the topic of school violence. A history of school violence in America was given to demonstrate the pervasiveness of the problem within urban, suburban, and rural areas. The topic of violence prevention was introduced exploring the theories of school violence and the development of prevention programs to ameliorate violence on school campuses. However, a paucity of outcome research related to violence prevention programs was reported. A gap in the literature examining gender and ethnic differences with regard to school violence and violence prevention programs was established. Chapter II will provide a review of the literature related to school violence and violence prevention programs. Additionally, literature related to each of the variables examined in this study will be presented highlighting gender and ethnic differences. It will discuss in detail the need for continued empirical research demonstrating program efficacy. It should be stated again that this study in no way claims to support or refute the efficacy of Project Peace considering the inherent limitations found in the original research. The purpose of the present research study will
simply add information to the already existing body of knowledge on school violence prevention programs.
CHAPTER II
REVIEW OF RELATED LITERATURE

This chapter provides a review of the literature as it relates to the present study. It will be organized in the following manner: 1) a brief introduction, 2) a history of violence in American schools, 3) a summary of adolescent development, 4) a discussion of the school climate/environment, 5) a presentation of anti-violence programs in the United States, and 6) a discussion of the hypothesized outcomes. Gender and ethnic considerations will be presented with regard to school violence and each of the hypothesized outcomes. The chapter will conclude with a summary of the related literature and a final study rationale statement.

Introduction

Research examining the causes and effects of school violence has yielded mixed results (Caulfield, 2000; Cornell, 1999; Elliot, Hamburg, & Williams, 1998; Hammond, 1990). As discussed previously, there are a myriad of theories attempting to uncover what causes adolescents to react in violent ways particularly in the school environment. Some researchers suggest that the availability of guns are to blame (Elliot, 1994; Guns Free Schools Act, 1994); others cite the media and absentee parents as causes (Bennet, 1999; Elliot, 1994); and still others point to drug and alcohol use, and the competitive social nature of the school environment (Wheeler & Stomfay-Stitz, 2000) as reasons why the youth of our nation react in violent ways in academic environments. While research
continues to focus on discovering the causes of school violence, it has become essential to continue to educate our youth and keep them safe in the process. Thus, developing and evaluating prevention programs that accomplish these goals is of utmost importance. Additionally, empirical validation of existing programs is necessary to demonstrate program efficacy and reduce the incidence of school violence.

History of Violence in American Schools

Chapter I presented a brief history of school violence. This section serves to expand on the history of violence in American schools in an attempt to demonstrate the pervasiveness and seriousness of this public health epidemic while adding support for the present study.

Early Reports of School Violence

The decade of the 1970's saw a shift in the expression of violence on school grounds across the United States. Earlier incidents of school violence were committed by adults against students and teachers. During the 1970's students themselves, were beginning to become perpetrators (Grapes, 2000). On December 30, 1974 in Olean, New York (a suburb of Buffalo), 18-year-old honor student, Anthony Barbaro, brought guns and homemade bombs to school. On this cold winter's day he pulled the fire alarm and began shooting at the janitors and responding firemen. When his tirade was complete, the SWAT team found him sleeping in a closet listening to “Jesus Christ Superstar” on his headphones. Barbaro committed suicide via hanging himself while awaiting trial.

On March 18, 1975 in St. Louis, Missouri, Stephen Goods, 16, was involved in a fatal shooting that ended his own life. Although he was not involved in the hallway
quarrel that ended in gunshots, Stephen was in the wrong place at the wrong time. Three other students were convicted of the homicide (Grapes, 2000).

A few years later, on May 19, 1978 in Austin, Texas a teacher was killed by 13-year-old John Christian as the school day was coming to a close. The boy, an honor student, was the son of George Christian, the former press secretary to President Lyndon B. Johnson. Later that same year, in Lansing, Michigan, Roger Needham, 15, killed a male classmate and wounded another young boy at his local high school. Roger served a four year sentence in a juvenile facility before going on to get his Ph. D. in mathematics and teaching at the City College of New York (Grapes, 2000).

More reports of school violence made the headlines of television programs and newspapers alike during the latter part of the 1970's and 1980's. For example, on January 29, 1979 the first high profile school shooting made the headlines. As described in Chapter I, 16-year-old Brenda Spencer took a .22 caliber rifle and killed the principal and a school janitor; 9 other students and a police officer were injured in the event (Grapes, 2000). Another high profile case of school violence occurred several years later in 1987 (as noted in Chapter I). On March 2, 12-year-old Nathan Ferris took a classmate's life for teasing him. The Missouri honor student then took his own life. The 1978 release of the Safe School Study Report to Congress launched the first shocking statistics regarding violence in American schools. This report indicated that approximately 282,000 students and 5,200 teachers were physically assaulted in secondary schools every month (National Institute of Education, 1978).

During the early 1980's, there were few reports of school violence. Yet, the later part of the decade brought with it two more incidents of school violence. On September
26, 1988 in Greenwood, South Carolina, 19-year-old James William Wilson Jr. killed an
8-year-old and wounded a total of 14 other children and a physical education teacher at
Oakland Elementary School (Grapes, 2000). Less than 2 months later on December 16,
1988 in Virginia Beach, Virginia, 15-year-old Nicholas Elliot opened fire with a
semiautomatic pistol on his teachers at the Atlantic Shores Christian School. His assault
left one teacher dead and another teacher badly injured. Elliot had planned to open fire
on his classmates, but his gun locked. He is serving 114 years for this incident (Grapes,
2000).

The 1990's-Present

A number of incidents of school violence have occurred in the past decade.
During this time, school violence has changed; it has become more lethal, random and
frequent; occurring in urban, suburban and rural locales in equal proportions (Elliot,
Hamburg, & Williams, 1998). Table 1 presents a time-line of some of the incidents of
school violence that have occurred in the past 10 years. This list is not meant to be
exhaustive rather it serves to demonstrate the pervasiveness of school violence as it
occurs in a variety of locales (urban, suburban, and rural).
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 18, 1993</td>
<td>Grayson, KY</td>
<td>A teacher and a custodian were held hostage and then shot to death by a senior student. (E. Carter HS)</td>
</tr>
<tr>
<td>October 12, 1995</td>
<td>Blackville, SC</td>
<td>A student shot and wounded two math teachers with a .32 caliber revolver.</td>
</tr>
<tr>
<td>November 15, 1995</td>
<td>Lynnville, TN</td>
<td>A seventeen-year-old boy shot and killed a student and a teacher with a .22 rifle.</td>
</tr>
<tr>
<td>February 2, 1996</td>
<td>Moses Lake, WA</td>
<td>Barry Loukaitis (14) walked into algebra class with a hunting rifle, opened fire, killing the teacher and two students; a third student was injured during the incident.</td>
</tr>
<tr>
<td>February 19, 1997</td>
<td>Bethel, AL</td>
<td>Sixteen-year-old Evan Ramsey killed his principal and a classmate when he walked into his school and fired a .12 gauge shotgun. Two students were wounded.</td>
</tr>
<tr>
<td>October 1, 1997</td>
<td>Pearl, MS</td>
<td>Luke Woodham (16) stabbed his mother to death, then went to his high school and shot 9 students; 2 died including Woodham’s ex-girlfriend.</td>
</tr>
<tr>
<td>December 1, 1997</td>
<td>West Paducah, KY</td>
<td>Michael Carneal (14) killed 3 students and (Heath High School) wounded 5 others during a prayer circle.</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 24, 1998</td>
<td>Jonesboro, AK (Westlake Middle School)</td>
<td>Mitchell Johnson (13) and Andrew Golden (11) killed 4 classmates and a teacher, and wounded 10 others during a false fire alarm.</td>
</tr>
<tr>
<td>April 24, 1998</td>
<td>Edinboro, PA (W. Parker Middle School)</td>
<td>Andrew Wurst (14) shot a science teacher to death at a graduation dance.</td>
</tr>
<tr>
<td>May 21, 1998</td>
<td>Springfield, OR</td>
<td>Kip Kinkel (15) opened fire in the high school cafeteria. Three students were killed; 19 were injured; another student died later.</td>
</tr>
<tr>
<td>April 20, 1999</td>
<td>Littleton, CO (Columbine High School)</td>
<td>Eric Harris (18) and Dylan Klebold (17) stormed their school with guns and bombs. A total of 15 people, including themselves, were killed; 28 were wounded.</td>
</tr>
<tr>
<td>November 19, 1999</td>
<td>Deming, NM</td>
<td>A 12-year-old boy shot and killed a female classmate at the end of the lunch period.</td>
</tr>
<tr>
<td>December 6, 1999</td>
<td>Fort Gibson, OK</td>
<td>A 13-year-old student opened fire with his father's 9mm semiautomatic handgun. Five classmates were seriously wounded.</td>
</tr>
<tr>
<td>February 29, 2000</td>
<td>Mount Morris Township, MI</td>
<td>A first-grader shot and mortally wounded another 6-year-old one day after the two had quarreled in the schoolyard.</td>
</tr>
<tr>
<td>Date</td>
<td>Location</td>
<td>Event</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>May 26, 2000</td>
<td>Lake Worth, FL</td>
<td>Nathaniel Brazill (13) shot his teacher after the teacher would not allow Brazill to enter his class and speak to a female classmate.</td>
</tr>
<tr>
<td>July 17, 2000</td>
<td>Renton, WA</td>
<td>Josh Warnock (13) opened fire in his school cafeteria. No one was injured.</td>
</tr>
<tr>
<td>March 5, 2001</td>
<td>Santee, CA</td>
<td>Charles &quot;Andy&quot; Williams, 15, opened fire at his school killing 2 students and wounding 13.</td>
</tr>
<tr>
<td>(Santana High School)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 7, 2001</td>
<td>Williamsport, PA</td>
<td>Beth Bush (Grade 8) opened fire in the school cafeteria with her father’s gun wounding a rival student who allegedly relentlessly teased Beth.</td>
</tr>
<tr>
<td>(Bishop Neumann RC Junior &amp; Senior High School)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 22, 2001</td>
<td>El Cajon, CA</td>
<td>Jason Hoffman (18) opened fire on Granite Hills' administration building, wounding five. The school is located 6 miles away from Santana High School where shooting occurred just three weeks prior.</td>
</tr>
<tr>
<td>(Granite Hills High School)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 15, 2002</td>
<td>New York, NY</td>
<td>Two students were gunned down in the school by a non-student on the day designated to honor the peaceful teachings of Dr. King.</td>
</tr>
<tr>
<td>(Martin Luther King Jr. High School)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The American Medical Association conducted the first nationwide investigation of violent deaths associated with schools in the United States. The researchers found that in the 2-year period from 1992 to 1994, 105 school-associated violent deaths were reported (Kresnow, Sleet, & Lowry, 1996). The estimated incidence of school-associated violent deaths was 0.09 per 100,000 students per year; the deaths occurred in communities of all sizes in 25 different states. The researchers concluded that since “school-associated violent deaths were more common than previously estimated...a comprehensive approach that addresses violent injury and death among young people at school...is suggested” (Kresnow, et al., 1996, p. 1733).

Similar findings were found in a recent study commissioned by the Division of Violence Prevention at the Centers for Disease Control and Prevention. The objective of the study was to describe the recent trends and features of school-associated violent deaths in the United States in response to a series of high-profile school shootings that occurred in the latter part of the 1990's. Anderson et al. (1999) conducted a population-based surveillance study of data collected from media databases, state and local agencies, and police and school officials from July 1, 1994 through June 30, 1999. A case of school-associated violence was defined as:

a homicide, suicide, legal intervention, and intentional or unintentional firearm-related death of a student or non-student in which the fatal injury occurred (1) on the campus of a public or private elementary or secondary school, (2) while the victim was on the way to or from such a school, or (3) while the victim was attending or traveling to or from an official school-sponsored event. (Anderson et al., 1999, p. 2696)
The researchers found that between 1994 and 1999, 220 incidents of violence-related deaths occurred on the grounds of U.S. schools resulting in 253 deaths (Anderson et al., 1999). Of the 220 incidents, 202 involved 1 death and 18 involved multiple deaths; 172 were homicides; 30 were suicides; 11 were homicide-suicides; 5 were legal intervention deaths; and 2 were unintentional firearm-related deaths. An estimated average annual incidence of 0.069 deaths per 100,000 students was found. Although this incidence rate of school violent deaths was lower than reported by Kachur and his colleagues (1993), Anderson and his colleagues (1999) concluded: “although school-associated violent deaths remain [statistically] rare events, they have occurred often enough to allow for the detection of patterns and the identification of potential risk factors. This information may help schools respond to this problem” (p. 2700).

Summary of Adolescent Development

The information presented thus far has discussed school violence as a public health concern and has examined the history of tragic school-ground violent acts. One of the goals of this research is to examine Project Peace as a violence prevention tool with adolescents. This section serves to summarize the literature with regard to adolescent development. It is useful to present both the normal and abnormal features of this developmental stage as it may serve to explain or understand some of the causes or contributing factors to school violence.

It is generally agreed that adolescence can be broken down into three developmental sub-levels: early adolescence (ages 12-14), middle adolescence (ages 15-16), and late adolescence (ages 17-19) (Caplan, 1974). Each of these sub-stages brings with it a host of changes physically, socially, cognitively, and emotionally. The present
study is interested in examining the periods of development characterized as early and middle adolescence as the students in the present sample of Project Peace participants range in age from 14 to 16. Thus the information that follows is limited to the developmental periods of early and middle adolescence.

During the past 20 years there has been a huge increase in the amount of attention paid to adolescent development (Steinberg & Morris, 2001). “Few developmental periods are characterized by so many changes at so many different levels—changes due to pubertal development, social role redefinitions, cognitive development, school transitions, and the emergence of sexuality” (Eddles et al., 1993). Hall (1904) viewed adolescence as a period of “storm and stress,” highlighting the notion that adolescence marks a life stage that is filled with many developmental changes. Conceptualizing adolescence through several lines is important to gain a full understanding of the factors that contribute to both normal and abnormal development. The information that follows will examine adolescence: 1) physical development, 2) cognitive development; and 3) emotional/psycho-social development.

Physical Development

The period of adolescence that is characterized by rapid physical growth and the sexual changes that make reproduction possible is referred to as puberty (Berger, 1998). The physical changes of puberty typically occur between the ages of 10 and 20 (Berger, 1998). The onset of puberty is initiated by a series of hormonal events that result in a sequence of both visible physical changes and internal development.

For girls, these changes include, in order: the emergence of breast buds, the initial appearance of pubic hair, widening of the hips, peak growth
spurt, first menstrual period (menarche), the completion of pubic-hair
growth, and final breast development. For boys, pubertal changes include,
in approximate order: growth of the testes, growth of the penis, and the
initial appearance of pubic hair, first ejaculation, peak growth spurt, voice
changes, beard development, and completion of pubic-hair growth.

(Berger, 1998, pp. 385-386)

Although a complete examination of the physiological changes that occur during
adolescence is not appropriate here, it must be understood that a complex series of events
at a microbiological level occurs leading to the physical maturational changes of puberty.
Simply, the onset of puberty starts with a hormonal signal from the hypothalamus—a brain
structure located at the base of the brain. This signal stimulates the pituitary gland (next
to the hypothalamus) to produce hormones that then stimulate the adrenal glands (two
glands near the kidneys) and the gonads—the sex glands (ovaries and testes). The series of
hormonal changes that occur during puberty and adolescence have been implicated in
producing the emotional changes that accompany this life phase (Feldman & Elliot,
1990). Increasing levels of these hormones, specifically testosterone, can produce
increased arousal and is related to the rapid shifts of emotion that are often associated
with adolescence. The extent of hormonal impact on the fluctuating mood of adolescents
must be examined in the cognitive, social, and emotional contexts in which these physical
and physiological changes occur as they have an impact on the interpersonal experience
of this stage of development (Feldman & Elliot, 1990).
Cognitive development can be defined as the emergence of the thinking and organizing systems in the brain (Feldman & Elliot, 1990). The literature owes its earliest understanding of cognitive processes to Jean Piaget; he is credited with putting forth the first theory of human cognitive development. In short, Piaget's theory provides an understanding of the intellectual and perceptual development of an individual from birth to adulthood. He concluded that there are four stages of development in a person's life that help explain how individuals think, retain knowledge, and adapt to the environment. The formal operational stage is the fourth and final stage in Piaget's theory. It begins at approximately 11-12 years of age, and continues throughout adulthood. Thus it is important to discuss in examining adolescent development. (Although, Piaget does note that some people may never reach this stage of cognitive development.) The formal operational stage is characterized by the ability to formulate hypotheses and systematically test them to arrive at the answer to a problem or dilemma. An individual at this stage is able to think abstractly and to understand complex mathematical and scientific problems (Inhelder & Piaget, 1958).

According to Piaget, there are additional processes at work that enable an individual to develop cognitively: assimilation and accommodation. Assimilation refers to the integration of external elements into an individual's internal structure; an important requirement for assimilation is an internal structure ('schema') that can make use of the information. Conversely, accommodation refers to the adjustment of internal structures (schemas) to the particular characteristics of specific situation in the external environment (Inhelder & Piaget, 1958).
Although brief, this section introduces the cognitive development that occurs during adolescence. It is clear from Piagetian theory that a host of biological and environmental factors are involved in the development of cognitive capabilities during all life stages. The emotional/psycho-social development of the pubertal child will be discussed next and will more fully demonstrate the inextricable relationship between the bio-psycho-social factors that affect the developmental processes during the adolescent years.

Emotional/Psycho-Social Development

Adolescence is often conceptualized as a shift towards independence, a move away from the family of origin towards a development of self. A key task of early and middle adolescence is the formation and consolidation of an identity, including a personal identity, and a racial/ethnic identity (Allen, Leadbeater, & Aber, 1994). Perhaps the most notable contribution in the understanding of the psycho-social development of humans comes from Erik Erikson.

Erikson's theory consists of eight stages of development. Each stage is characterized by a different conflict that must be resolved by the individual. When the environment makes new demands on people, the conflicts arise. The person is faced with a choice between two ways of coping with each crisis, an adaptive or maladaptive way. According to Erikson, it is only when each crisis is resolved, involving a change in personality, does the person have the tools to deal with the next stages of development (Erikson, 1968). If a person is unable to resolve a conflict at a particular stage, they will confront and struggle with it later in life (Berger, 1998).
According to Erikson, adolescence represents the fifth stage in psycho-social development and includes those individuals ages 12-18. At this stage, adolescents are in search of an identity that will lead them to adulthood. The conflict that must be addressed during this life phase is identity versus role confusion; adolescents make a strong effort to answer the question "Who am I?" Erikson notes that the healthy resolution of earlier conflicts now serve as a foundation in the search for an identity. If the child overcomes earlier conflicts they are prepared to search for identity (Berger, 1998). A positive outcome of this stage results in the formation of an individual identity. The adolescent must make a conscious search for identity and this is built on the outcome and resolution to conflict in earlier stages. For example: adolescents attempt to establish their own identities and see themselves as separate from their parents. If the adolescent cannot make deliberate decisions and choices, especially about a vocation, sexual exploration, and life in general, role confusion becomes the result.

Abnormal Adolescent Development

Research has suggested that there are a number of 'requirements' that must be met for the development of a healthy adolescent (Berger, 1998; Carnegie Council of Adolescent Development, 1995). These include but are not limited to the following: 1) the formation of a sense of identity; 2) the development of close interpersonal relationships; 3) the mastery of social skills and conflict resolution skills; 4) the procurement of a valued place in a constructive group; 5) the establishment of a sense of personal self-worth; and 6) the development of problem-solving skills. This list demonstrates the relationship between the physical, cognitive and psycho-social processes that must occur during adolescence for an individual to develop 'normally.'
Yet, the potential for maladjustment or abnormal development is great when one considers the interrelated processes that occur during adolescence. Individual, biological, emotional, social and environmental factors may lead to a delay or an interruption in maturity resulting in abnormal development (Steinberg & Morris, 2001).

From a biological/physiological perspective, the timing and duration of puberty may affect the ability of an individual to develop “normally.” Both genetic and environmental factors may contribute to a delay in biological development (Berger, 1998), affecting one’s ability to achieve the physical milestones of puberty. It has been previously mentioned that the hormonal fluctuations during adolescence may contribute to rapid mood swings that are characteristic of this stage of life (Feldman & Elliot, 1990). Physiological deviations in anatomy may affect an individual’s response to hormonal fluctuations leading to a more negative expression of affect during pubertal development. It would serve researchers and clinicians alike to be cognizant of these physiological responses to puberty when examining adolescent development.

In addition to physical changes that may affect pubertal development, delays in cognitive development may occur during adolescence affecting an individual’s ability to acquire typical intellectual skills and capacities. The brain is the fundamental structure involved in the development of cognitive capacities suggesting the interplay between physiology and cognition. In addition, Piaget noted that the relationship between cognition and environmental adaptation is such that lags in this stage inhibit an adolescent’s ability to reason theoretically, think abstractly, and adapt to the environment (Inhelder & Piaget, 1958).
The psycho-social development of adolescents involves navigating through the ‘crisis’ of identity versus role confusion as defined by Erikson. When an adolescent is not able to resolve this conflict in a positive way, an individual identity does not develop. It has been demonstrated that failure to develop a sense of identity in adolescence leads to involvement with negative peer groups, delinquent activities including drug and alcohol use/abuse, violence, and school failure, and future mental health difficulties (Allen et al., 1994; Guerra, & Slaby, 1990). This highlights the importance of fostering appropriate psycho-social development during adolescence.

School Climate/Environment

As with many other social problems that plague the youth of our society (drug use and sexual promiscuity) the responsibility of “doing something” lies in the hands of school administrators and teachers. When school violence is considered, it appears that this liability justly belongs on the school campuses across our nation. School is where children and adolescents spend at least two-thirds of their time and the place where intervention strategies to deal with school violence rightly belongs.

The 1997 Gallup Poll assessing the attitudes of educators toward public school environments revealed that fights, violence and gangs along with a lack of discipline are the most significant problems facing American schools (Rose & Gallup, 1998). In response to these findings, researchers at the School Violence Resource Center commissioned a study designed to address the seriousness of school violence (School Violence Resource Center, 2001). Evaluations are currently being completed to assist education administrators and teachers create a school climate that is conducive to learning without being intrusive. Given that evaluations have yet to be completed speaks
to the need for further research in this area and meaningful outcome research to properly address school violence.

In a study examining a solution to dealing with the social problems of school violence, Caulfield (2000) discusses the creation of ‘peaceable schools.’ Peaceable schools refer to school environments in which violence is minimized and where students are made to feel they are important entities and given the opportunity to explore learning (Caulfield, 2000). A peaceable school is a school that can easily remain focused on the traditional ‘three Rs’ of education. It need not create an unnecessary amount of new work for teachers and administrators. “Instead, by creating a school climate that is truly oriented toward peace, teachers and administrators would be freed to accomplish their educational mission rather than spending an abundance of time engaged in disciplinary actions against schools” (Caulfield, 2000, p. 174). While this study provides teachers and educators with suggestions for creating a positive school environment, empirical evidence of a ‘peaceable school’ is not reported nor is statistical data or results. External validity is thus questionable at best.

Additional research has demonstrated that a systemic approach be taken to develop a positive school climate in an effort to reduce school violence (Stephens, 1998; Wheeler & Stormfay-Stitz, 2000). This will provide students, teachers and administrators with an academic atmosphere conducive to teaching and learning. Accordingly, it becomes the responsibility of the school officials, administrators, faculty and students to create an academic environment free of intimidation and fear of violence where students can learn and teachers can teach. Developing a climate of ownership and school pride has been postulated as one way of creating a positive school climate (Stephens, 1998).
Stephens (1998) provides suggestions for safe school planning that involves all members of the school community (students, parents, teachers, school staff and community leaders) through student and staff surveys, and focus group discussions endorsing a sense of empowerment. This process may allow for the development of feelings of connectedness among the students and school staff, whereby the members feel like a key part of the school community. Stephens (1998) concluded that when students feel engaged and connected to their school, the likelihood of engaging in violent activities on school grounds decreases.

The concept of school connectedness as it relates to improvements in the school environment/school climate was recently examined by McNeely, Nonnemaker, and Blum, (2002). They examined the association between school connectedness and the school environment. The researchers utilized data from the National Longitudinal Study of Adolescent Health including 75,515 students in 127 schools nationwide. The results of their research suggest that a negative relationship exists between a positive school environment and adolescent engagement in health-risk behaviors including substance use/abuse, violence and promiscuity (correlation coefficients were between .73 and .83, p < .01). These findings support the Institute of Medicine’s speculation that “a healthful psychosocial environment [in school] may be as important-or even more important-than classroom health education in keeping students away from drugs, alcohol, violence, risky sexual behavior and the rest of today’s social morbidities” (Kresnow et al., 1996, p. 66).

While this study provided useful information regarding the relationship between a positive school climate and adolescent engagement in health-risk behaviors, generalizations to the larger population must be made with caution. McNeely,
Nonnemaker, and Blum (2002) fail to report the demographic information of the sample examined. Thus it is not known if the participants are representative of the larger population. Similarly, information regarding gender and ethnic breakdowns was not reported limiting the usefulness and applicability of the results of the study.

Taken collectively, the information presented in this section highlights the importance of developing a positive school climate/school environment in an attempt to prevent the occurrence of violent acts by adolescents on school grounds. Additionally, it demonstrates the appropriateness of providing violence prevention education in the schools considering the amount of time students are engaged in academic activities on school campuses.

School-Based Anti-Violence Programs

in the United States

As youth violence continues to rise in the United States while adult crime rates continue to fall, the search for effective youth violence prevention strategies becomes more urgent (Blumstein, 1995). The near-universal school attendance by American children (until sometime in high school) makes schools a common site for preventive interventions, including strategies to prevent youth violence. Yet, despite the growing need for youth violence prevention and the logic and attractiveness of using schools as prevention sites, the literature on empirical evaluations of school-based violence prevention initiatives is scattered and thin. The purpose of this section is to provide a developmental and contextual framework from which to understand current attempts at school-based violence prevention. A review of several school violence prevention
programs that have been systematically reviewed in the literature will be given and a presentation of the characteristics of successful programs will be provided.

A Developmental-Contextual Framework

The key components of a developmental-contextual framework are the related concepts of 1) development as a series of stage-salient tasks to be mastered, and 2) the idea that the features of a child’s environment that are critically important to developmental success change with the key tasks to be mastered at each stage of development (Bronfenbrenner, 1975, 1979). Sroufe, Cooper, DeHart, Marshall, & Bronfenbrenner (1992) have implicated this framework in the development of the child and his or her immediate care-taking environment.

It has been posited that the most important stage-salient task of socioemotional development in infancy is the development of a secure, trusting attachment relationship with a primary caregiver (Sroufe, 1988; Sroufe, Carelson, & Shulman, 1993). The corresponding integral feature of a care-taking environment is the provision of sensitive, responsive caretaker; the key factor influencing a secure attachment. This demonstrates several points. First, it shows that a stage-salient task is not a stage-specific task. Although the development of a secure attachment is especially salient in infancy, attachment to others remains a lifelong task (Sroufe et al., 1993). Second, the successful adaptation of one stage-salient task increases the chances of success in adapting to later tasks, for example to the development of self-regulation in the preschool years or identity formation in adolescence. Researchers (Aber, Brown, Chaundy, Jones, & Samples, 1996; Connell, Aber, & Walker, 1995) have begun to explore the details of this perspective for older children and adolescents in addition to environments that extend
beyond parents and family, including schools and neighborhoods. What is evident is that the social context that promotes successful development must change to promote adaptation to stage-salient tasks.

The developmental-contextual framework calls for the examination of the context in which an individual or group functions. In adolescence an important environment or context that needs to be assessed is the school. The organizational characteristics found in junior high and high school that have been found to influence adolescent academic success are: 1) the practice of changing classes with their “homeroom” class; and 2) being instructed in a “school within a school” or a smaller, more personalized classroom environment (Johnson & Johnson, 1995). Both of these organizational factors may operate by affecting the nature and functioning of an adolescent’s peer group and the development of an adolescent’s sense of self or individual identity. In addition, whether a peer group is primarily prosocial or antisocial in orientation affects the probability of the endorsement and execution of aggressive and violent behaviors (Allen et al., 1994).

How the various violence prevention initiatives currently in practice in schools affect identity processes and peer relationships is currently under-examined, but a potentially important issue in adolescent development. It appears as though schools adopt widely divergent anti-violence strategies. For example, some schools utilize security measures that include metal detectors and police officers and/or enforce zero-tolerance policies as a seemingly aggressive approach to addressing the problem of weapon possession and violence on school property. Conversely, other schools choose to address the problem of school violence through peer mediation, conflict resolution and violence prevention programs. It is the latter two approaches that serve as the
frameworks from which Project Peace was developed and that is the focus of the present research. The section that follows provides a review of three violence prevention programs that have been or are being evaluated using empirical methodology. This is not meant to be an exhaustive list; rather, it represents programs about which sufficient printed information could be secured and supports the need for continued empirically driven evaluations.

School-Based Violence Prevention Programs

Second Step. The Second Step program is unique in that it offers a school-based violence prevention curriculum to children as young as three years old (Moore & Beland, 1992). The curricula are developmentally sequenced for use with four age groups: preschool-kindergarten, first-third grade, fourth-fifth grades and middle school/junior high school. The intervention consists of 30, 35-minute classroom-based lessons conducted up to three times weekly that are divided into three units: empathy training, impulse control and anger management. The lesson format consists of photographs and stories that depict social situations requiring problem solving or specific social skills. Video vignettes are also included that are designed to facilitate, discuss and practice newly learned skills. Second Step’s goal is to reduce aggressive and impulsive behaviors and to increase the overall social competence among the participants.

Pilot studies examining the effectiveness of Second Step suggest that participation in the program produces positive behavioral changes in the children who participated in the program (Sylvester & Frey, 1994). Formative studies utilizing the first edition of Second Step were conducted in 12 public and 2 private schools located in urban and suburban regions of Washington. According to Sylvester and Frey (1994) the "teachers
who taught the prototype version gave high ratings to the program in general, the lesson format, and the teacher's guide" (p. 7).

Social and emotional learning was assessed by interviewing students who did or did not receive the Second Step program in their classrooms. This included 85 and 38 students respectively, at the preschool/kindergarten level; 19 and 16 students in grades 1-3; 71 and 46 students in grades 4-5; and 34 and 13 students in grades 6-8. An initial assessment occurred one week prior to the start of the Second Step curriculum and a follow-up assessment occurred one week after the final lesson. Sylvester and Frey (1994) reported that:

The results of the formative studies suggest that the Second Step program may foster social skills knowledge with students in preschool, elementary, and middle/junior high classrooms. Students in middle school and junior high who received the program were less likely than comparison students to view aggressive behavior as legitimate or to perceive prosocial behaviors as difficult to perform. (p. 10)

Additionally, Sylvester and Frey (1994) reported that the children's perspective-taking and social problem-solving abilities improved significantly after participating in the Second Step program. Participants in the four grade ranges showed similar gains in knowledge with pretest to posttest scores increasing from 42 to 55 percent. Children in classrooms without Second Step lessons showed no improvement from Time 1 to Time 2. However, while the researchers reported positive outcomes, the statistical data and outcomes were not provided. The lack of random assignment to groups further limits the generalizability of the findings.
In an effort to provide statistical validation for Second Step, Grossman, Neckerman, Keopsall, Liu, Asher, Frey & Rivara (1997) examined the effectiveness of this program in 12 urban and suburban elementary schools. Six matched pairs of schools with 790 second-grade and third-grade students participated. Grossman et al. (1997) reported that 53% of the students were male and 79% were white. The intervention consisted of curriculum utilizing 30 specific lessons (2-3 aggression prevention lessons per week for 16-20 weeks) designed to teach social skills related to anger management, impulse control and empathy. The researchers employed a randomized trial procedure that measured changes in aggression and pro-social behavior in school prior to initiating the program, two weeks after completion, and at six months post-intervention. Measures included parent and teacher reports and observation of a random sub-sample of 588 students in the classroom and playground/cafeteria settings.

The results at the time of the final evaluation revealed that scores did not differ significantly between the intervention and control schools for any of the parent-reported or teacher-reported behavior scales. However, the behavior observations did reveal an overall decrease two weeks after the curriculum in physical aggression \( (p < .05) \) and in increase in neutral/pro-social behavior \( (p < .05) \) in the intervention group compared with the control group. Rates of physical aggression, including kicking, shoving, and hitting, for the experimental group decreased by 29%, while the rates of aggressive behavior among children who were not participants in the program were also found to increase over time \( (+41\%) \). In addition, rates of neutral/pro-social behavior increased by 10% for the intervention group and remained the same over time for the control group. Grossman and colleagues (1997) concluded that Second Step is a violence prevention curriculum
that leads to a moderate decrease in observed physically aggressive behavior and an increase in neutral and pro-social behavior in school. Although this evaluation of Second Step utilized a randomized control trial, a moderate interobserver reliability score was reported ($K = .60$). The external validity and generalizability of these findings must, therefore, be made and used with caution.

More recently, the Second Step, Middle School/Junior High program was expanded from the original 1-year curriculum to a 3-year curriculum (Van Schoiack-Edstrom, Frey, & Beland, 2002). The pilot study was designed to examine the effects of the expanded program on adolescents' beliefs about the "legitimacy of aggression and the perceived difficulty of performing prosocial behaviors" (Van Schoiack-Edstrom et al., 2002, p. 205). A total of 714 students in sixth ($n = 179$), seventh ($n = 382$), and eighth ($n = 153$) grades participated. The participants were drawn from five schools in the United States and Canada. Intervention and control classrooms were drawn from four of the five schools. A total of sixteen educators (11 female) from the five participating schools; 15 teachers and 1 principal. A cross-sectional, repeated measures design was employed.

Students in the sixth and seventh grades ($n = 387$) in their first year of middle/junior high school were instructed utilizing the first year curriculum for Second Step; seventh and eighth grades ($n = 327$) in their second year of middle/junior high school students were administered the second year curriculum. The teachers reported that lessons were taught between 1 and 5 times per week, with those teaching the Year 2 curriculum reportedly teaching significantly more lessons per week ($p < .05, M = 3.00$) than those teachers administering the Year 1 curriculum ($M = 2.33$). The goal is to provide the modules in sequence. However this study evaluated the students' responses
to the second year curriculum of Second Step without exposure to the previous unit (year 1 curriculum); a cross-sectional design. While this study provided for evaluation of the first two modules the current design would not permit for the responses to the Year 1 and Year 2 programs to be compared; the samples, variations in program content and in lesson concentration represent confounding variables that most likely affected the outcomes (Van Schoiack-Edstrom, et al., 2000).

Results indicated that Year 2 program participants' endorsement of aggression was significantly lower at posttest than non-participants. More specifically, Year 2 students were less likely to endorse a variety of aggressive behaviors: Physical Aggression, $t (291) = -4.29, p < .001$; Verbal Derogation, $t (289) = -5.07, p < .001$; and Social Exclusion, $t (292) = -6.29, p < .001$. Similarly when compared to controls, Year 2 students demonstrated a decrease in their perceived difficulty of performing social skills; Year 2 participants perceived social skills as less difficult to perform at posttest ($M = 18.04$) than at pretest ($M = 19.55$), $t (141) = 4.63, p < .01$. Conversely, Year 2 non-program participants remained constant in their perceptions from pre-test ($M = 20.20$) to posttest ($M = 20.09$), $t (111), p = ns$.

The program effects were found to be less consistent for those in their first year of middle/junior high school. At pretest, Year 1 participants endorsed Social Exclusion (a form of aggression) significantly more than non-participants, $t (323) = 2.11, p < .05$. However, Year 1 controls demonstrated a significant increase in their endorsement of social exclusion from pre-test to posttest, $t (72) = -2.50, p < .05$, while Year 1 Second Step participants level of endorsement remained constant. In addition, a repeated measure ANOVA for Year 1 participants on Perceived Social Difficulty revealed
significant main effects for Time, $F(2, 226) = 4.70, p < .05$, and Time x Gender, $F(2, 226) = 6.95; p < .01$, but no Group effects. A significant decrease in perceived difficulty in performing social skills was found for Year 1 girls from pre-test ($M = 19.92$) to posttest ($M = 18.53$), $t(111) = 3.91, p < .001$. No differences were found for Year 1 boys, ($M = 18.55, 18.53$, respectively,) $t = ns$.

One of the limitations of this study was the failure to randomly assign the participants to intervention groups thus making inferences about causality impossible. An experimental design that counterbalances grade, program content and entry into junior high school would help sort out the curriculum and developmental effects (Van Schoiack-Edstrom, et al., 2002). Another limitation was the use of self-report measures which allows for participants to present themselves in socially desirable ways suggesting that the results of Second Step may have been due to the Hawthorne Effect rather than the intervention. Van Schoiack-Edstrom and colleagues (2002) reported that there were discrepancies among educators in the implementation of Second Step lessons. The concentration of lessons may affect the outcome and success of this program. Thus, failure to control for this factor needs to be considered in the evaluation of the results. Furthermore, the researchers indicated that long-term exposure to violence prevention/conflict-resolution training may have more long-lasting, permanent effects than one-time trainings and call for “a more comprehensive and sequence program implemented school-wide...to enhance social emotional learning (Van Schoiack-Edstrom, et al., 2002, p. 213).

While gender differences were examined, ethnic/cultural differences were not studied. Van Schoiack-Edstrom et al. (2002) stated that the schools ranged in ethnic
diversity (4% to 89% Caucasian) without providing more precise breakdown of ethnicity. This limits the generalizability of the findings.

*Resolving Conflict Creatively Program (RCCP).* The resolving conflict Creatively Program (RCCP) is one of the largest and longest running school-based violence prevention efforts in the United States (RCCP Research Group, 1997). It began in New York City in 1985 as a comprehensive program designed to promote conflict resolution skills and intercultural understanding. The curriculum for RCCP is designed for grades K-12; it includes materials appropriate for elementary, secondary and special education populations. RCCP is a 51-lesson curriculum that includes a peer mediation component and encourages parental involvement and support for resolving conflicts through non-violent means outside the school environment. The program seeks to promote all participants to extract learning objectives from RCCP and experiment with novel conflict resolution strategies in social situations. The primary outcome objectives of the RCCP are to:

Achieve a long-term reduction in violence and violence-related behavior; to promote caring and cooperative behavior among children, adolescents, and adults in and out of school; and to promote intergroup understanding and positive intergroup relations. (Aber et al., 1996, p. 82)

RCCP was created in a developmental context. The underlying premise of RCCP is that developmental trajectories are involved in the process of violence and aggression. Developmental-structural theory (Selman, Beardslee, Schultz, Krupa, & Podoresky, 1986) and social information processing theory (Dodge, 1986) suggest that social cognitive processes like hostile attributional bias and aggressive fantasies predispose
children to both engaging in more aggressive negotiation strategies and fewer competent negotiation strategies in situations of interpersonal conflict.

Theory and research suggests that processes such as normative beliefs about aggression and hostile attribution bias develop rapidly and are consolidated during late childhood and early adolescence (Dodge, 1986; Farrell & Meyer, 1997). Aber and colleagues (1996) developed RCCP in an effort to alter the developmental trajectory involved in violence and aggression in children and adolescents. They hypothesized that intervention during this developmental period will change the normative developmental trajectory and provide students with alternative strategies for managing interpersonal conflict.

Utilizing a quasi-experimental design, Aber and colleagues (1996) conducted an outcome evaluation of RCCP. More than 8,000 children and their teachers in the first through sixth grades from 15 New York City Public schools participated in this study. An estimated 60% of the participants received reduced or free lunch demonstrating the high poverty level among program participants. The sample included African American (38%), Latino (36%), Caucasian (22%), and Asian (4%) students. The schools that participated were chosen to represent four groups of diverse levels of intervention: no intervention; beginning level (1 to 2 classes per school participated); consolidation (several grades participated); and saturation (school-wide participation). The participants were exposed to the program through various modules: 25 hours of introductory training, RCCP classroom lessons, staff development support, administrator training, parent training, and peer mediation for a period of two years. Participants were randomly assigned to different ‘intervention profiles’: a high number of lessons per week (10 or
more), a medium number of lessons per week (5-9), or a low number of lessons per week (less than 4).

It was found that all of the children, regardless of program participation, developed more aggressive fantasies, more hostile attributional biases, more aggressive interpersonal negotiation strategies, and more conduct problems over the course of the academic year and as grade level increased. Similarly, levels of prosocial fantasies and competent conflict resolution strategies decreased over time with grade level. It was hypothesized that these outcomes occurred as a result of the normative developmental trajectory of aggression. However, the results of this study indicate that this developmental trajectory can be altered by participation in RCCP.

Analyses at one year suggested that the growth rates of aggressive problem-solving strategies, aggressive fantasies, and hostile attributional bias were retarded when children were provided with a large/high number of RCCP lessons (Aber, Jones, Brown, Chaudry & Samples, 1998). Positive effects of RCCP were found when a large number (10 or more) lessons were provided to the students, \( F(6, 2056) = 2.911, p < .006, \eta^2 = .004 \). Follow-up univariate interaction effects revealed significant differences by intervention profiles in change over time in children’s hostile attribution biases, \( F(2, 2056) = 4.873, p < .01, \eta^2 = .005 \), and their aggressive interpersonal negotiation strategies, \( F(2, 2056) = 4.064, p < .05, \eta^2 = .004 \). Thus “children’s developmental trajectories were improved by receiving more classroom instruction in conflict resolution and related skills by RCCP” (RCCP Research Group, 1997, p. 127).

One of the limitations of this study was that it only examined the short-term effects of RCCP. More longitudinal research is needed to measure the long-term effects
of RCCP on the developmental trajectories of violence and aggression. Additionally, Aber and his colleagues (1996) suggested that RCCP was designed for use with students from kindergarten through grade 12. However, they only examined program effectiveness in a sample of students in grades 2 through 6. This makes the generalizability of outcomes limited to this age group.

Although the researchers (Aber et al., 1996; Aber et al., 1998) utilized a contextual framework to examine the growth of aggression and hostile attributional bias, they looked at 'at-risk' students who resided in poor, underserved neighborhoods. This represents a biased framework as there is the possibility that the developmental trajectory of violence and aggression may be more environmental than developmental and universal in nature, further limiting the generalizability of their findings. It is possible that the occurrence of violence noted post-program participation was due to poor training and/or lack of sufficient follow-up training sessions. While the researchers purported that RCCP provided program participants with “intercultural understanding,” no mention was made of the steps taken in program development or execution to add cultural sensitivity to various ethnic groups. Nor were ethnic differences examined as outcome variables.

Positive Adolescent Choices Training (PACT). The Positive Adolescent Choices Training (PACT) program is a violence prevention model designed specifically for African American youth, ages 12-15 (Hammond, 1990). Although this program was developed more than a decade ago, it represents groundbreaking research in that it examines the differential cultural experiences of violence for African American adolescents. Hammond and Yung developed the Positive Adolescent Choices Training
(PACT) program, a violence prevention program created specifically for African-American adolescents.

Past research has indicated that African-Americans, particularly the poor, are likely to be over-represented as both victims and perpetrators of violence (National Center for Health Statistics, 1990). Additionally, African-American youth are disproportionately represented as victims of nonfatal forms of violence, including violence in the home (National Center for Health Statistics, 1990; National Crime Victimization Survey, 1992). This indicates a need for culturally sensitive investigations into the causes of violence and the need for violence prevention strategies.

In the development of PACT, Hammond and Yung (1991) stated that the origin of violence in the African-American community is not well understood. Hammond and Yung (1991) reported that several past studies have found a strong link between poverty and violence (Hampton, 1987; Palmer, 1987; Wilson, 1987), but little is known about the exact mechanism of action involved in the disproportionate representation of African Americans as perpetrators or victims of violence. Researchers have examined the biological roots of aggressive behaviors (Misky & Siegel, 1990), theories of cultural evolution which attribute to violent behavior to conflicts over social status (Daly & Wilson, 1988), and social phenomena including subcultural norms which support aggression as a legitimate means of resolving conflict (Palmer, 1987). Despite the recognition that violence is a serious issue in the African American adolescent community, “structured violence-prevention programs that have been both designed for African-American youth and shown to be effective are virtually nonexistent” (Hammond
& Yung, 1991, p. 362). The researchers recognized a gap in the research and in violence prevention program development resulting in the designing of PACT. PACT is grounded in cognitive-behavioral and social learning principles. It represents a three-part training method and was designed to: 1) to educate adolescents about the risks associated with violence; 2) to teach anger management skills; and 3) to teach prosocial skills (Hammond, 1990). Program participants engage in 38 classroom-based, biweekly training sessions that include peer-based videotaped vignettes, role plays, psychodramas, and open discussions. Skills-training is conducted in six areas: 1) providing positive feedback; 2) providing negative feedback; 3) accepting negative feedback; 4) resisting peer pressure; 5) solving problems, and; 6) negotiating (Hammond, 1990). Hammond and Yung (1991) reported that “minority teens orient for social comparisons more to their own ethnic groups than to majority adolescents” (p. 365). Thus models which capture the distinct style of minority teen subcultures are more credible and convincing to them than are models which are less culturally relevant. As such, PACT includes the use of ethnically similar models in an effort to provide skills-training and violence prevention techniques to African American adolescents that are culturally sensitive.

The evaluation of PACT utilized a sample of 57 adolescents, ages 12 to 15 years old. African-American students comprised 95% of the sample; 30% were females and 70% were males. A control sample of 60 same-aged students was also used and matched the experimental group with regard to gender and ethnicity. Results of the quasi-experimental evaluation of PACT (Hammond & Yung, 1991) revealed improvement in all six areas of skills-training as rated by both teachers and external observers. Hammond
and Yung (1991) found that 75% of PACT participants demonstrated improvement in skills, whereas only 43% of the controls gained skills. The proportion of skill loss over time was also significantly less of PACT participants (17%) when compared with the no-program controls (57%). Self-reports from the students/participants and official school records also demonstrated positive results; students reported an overall improvement in skills. School records also indicated a decrease in involvement in violence-related school behaviors including physical fights and verbal altercations.

The preliminary findings of Hammond and Yung (1991) indicate that PACT has the potential to be a useful violence prevention tool for African American adolescents. PACT incorporates effective cognitive-behavioral techniques and includes culturally sensitive materials and models. However, there are many limitations in this study. Despite their claims of improvement, Hammond and Yung (1991) fail to provide appropriate statistical validation for their findings. The results of this study need to be interpreted with caution because the sample size of the PACT participants was very small. Interpretative findings should also be made with caution due to the lack of appropriate statistical methods and less than robust measuring techniques employed by Hammond and Yung (1991).

Project Peace

As mentioned in Chapter I, de Anda (1999) developed Project Peace in response to a community need to address the issue of school violence in urban Los Angeles. Chapter I reviewed the theoretical underpinnings of Project Peace and the rationale behind de Anda’s scale development. To review, Project Peace represents a violence prevention program based on cognitive behavioral and social learning principles in an
effort to teach adolescents skills that will reduce the potential for violent confrontations among youth in the schools (de Anda, 1999). This section serves to critique Project Peace in light of the methodological flaws and lack of statistical rigor employed by the original researcher. In addition, the positive features of Project Peace will be explored demonstrating its potential as a useful violence prevention tool for the adolescent population and support the use of this violence prevention program in the present study.

Project Peace is a 10-session violence prevention program that incorporates the use of five measures designed to assess adolescent students’ attitudes and beliefs about the school climate (the School Climate Measure), anger (the Personal Anger Scale), and violence (Attitudes Toward Violence Measure). Project Peace also seeks to examine the students’ abilities to incorporate program materials (Skills and Knowledge Measure) and measure a change in the execution of violent and non-violent reactions to potential interpersonal conflicts (Monthly Behavior Report) (de Anda, 1999). However the empirical validation of these scales and the outcome evaluations are questionable and need to be reviewed.

de Anda (1997, 1999) reports high levels of internal consistency with the Alpha coefficients from three samples ranging from .57 to .83 on the five Project Peace measures. These coefficients indicate that the measures possess a high degree of internal consistency. Yet, the derivation of these statistical data is questionable as de Anda (1997) reported larger posttest sample sizes than pretest sample sizes in determining the Alpha levels of the five measures. For example, de Anda (1997) indicated that three samples were used to compute the internal consistency for the School Climate Measure. The following alpha coefficients were reported: pretests .78 (n = 140), .82, n = 157), .76
(n = 194); posttests .83 (n = 140), .80 (n = 157), .81 (n = 198). Similar discrepancies in sample sizes were reported for the additional four measures. No statistical methods to account for these unequal sample sizes were reported, indicating a threat to the internal reliability of the Project Peace measures in the original samples. Utilizing more stringent statistical methods to derive Alpha levels will improve the reliability of the measures and validity of outcomes.

de Anda (1997, 1999) reported that pilot studies were conducted on two separate occasions to provide statistical support for Project Peace. While demographic data were provided for both studies, results of the paired samples t tests were not provided. In the first pilot study, de Anda (1997) reported that “while the difference did not reach statistical significance, changes in the predicted direction were noted on three of the scales administered: the School Climate Measure, Attitudes Toward Violence Measure, and Personal Anger Scale” (p. 7). In the second pilot study, de Anda (1997) reported similar findings failing to supply adequate statistical support for her claims. For example, she reported that “statistically significant improvements from pretest to posttest were evident in four of the five measures” (1997, p. 7).

In addition, a paucity of outcome studies examining the efficacy of Project Peace have been conducted to date. de Anda reported that large scale evaluations are being conducted at the present time to provide statistical support where it is lacking (D. de Anda, personal communication, 1 August 2002). Likewise, no standard measure of establishing readability was reported making inferences about the appropriate use of Project Peace with a variety of age groups impossible. Until more rigorous
implementation and statistical analyses are conducted using Project Peace, the efficacy of this violence prevention program is questionable.

Despite the flaws of de Anda’s development and evaluation of Project Peace, this violence prevention program shows promise to be an efficacious tool for use with diverse adolescent populations. In a recent meta-analysis of violence prevention programs that employed sound research designs and multiple outcome studies supporting program effectiveness, Leff, Power, Manz, Costigan, and Nabors (2001) concluded that ‘successful’ violence prevention programs be grounded in a developmental framework that incorporates cognitive-behavioral principles and include: 1) changing underlying processes and transactions that lead to violence; 2) addressing those processes/transactions when they are still in the formative stage, before they are well established; and 3) providing cultural/contextual support for changing the processes and transactions. The use of structured and user-friendly manuals and handouts were also found to be features of successful violence prevention programs (Leff et al., 2001; Weisz & Hawley, 1998).

From the information presented heretofore, de Anda’s development of Project Peace is theory-driven and includes the features of a ‘successful’ program, that is, the use of cognitive-behavioral principles and a developmental-contextual framework. Additionally, de Anda incorporates cultural sensitivity in her measures including the use of culturally appealing language and phrases (dissing, “mess him up”). Similarly, de Anda’s pilot studies and original research used diverse populations indicating the potential for Project Peace to be effective with a variety of adolescent populations. The materials designed for use with Project Peace are easy to follow and require minimal
teacher training. This feature of Project Peace also indicates its potential for a useful violence prevention program.

Hypothesized Outcomes

The following section will provide a review of the related literature with regard to each of the hypothesized outcomes in the present study. It will be broken down into the following subsections based on the hypotheses outlined in Chapter I: 1) the school climate/environment; 2) anger; 3) students’ attitudes towards violence; 4) skills and knowledge; 5) conflict resolution skills. Each section will highlight the literature as it relates to adolescents and examine the gender and ethnic differences associated with each topic. This section will conclude with a presentation of ethnic and cultural issues that need to be considered when examining the issue of school violence.

The School Climate/Environment

The present study has defined the school climate/environment as the school campus including the physical environment, and the interactions with staff, teachers, and peers. Thus, the school climate/environment encompasses both the physical grounds of the school as well as the student’s interactions with each other and their teachers. The importance of creating an environment that is conducive to student learning has been documented in the literature (Caulfield 2000; McNeely et al., 2002). This section serves to introduce the various components of the school climate/environment as they impact students’ sense of safety and security in the academic setting.

School staff.

The presence and importance of staff in the schools cannot be refuted. Teachers spend the majority of the day with their students both in and out of the classroom. Yet,
how these adults contribute to fostering a sense of safety and security among their students needs to be examined. The literature to date simply provides educators with strategies, tools, and plans for creating safe school environments (Caulfield, 2000; Stephens, 1998). More rigorous research is needed in this domain to provide empirical validation for approaches to creating positive school climates that are proven effective in preventing school violence. Some examples of researchers' suggestions for creating positive school environments are presented below.

In an effort to create a peaceable school, Caulfield (2000) developed Project FREE (Facilitating, Resolving, Educating, Empowering). Although it was originally created for use in non-school settings, it was implemented in numerous schools since it was designed to teach nonviolent approaches to conflict. It represents an experiential learning method of teaching nonviolent approaches to conflict. Project FREE covers three main topics: understanding anger, effective communication, and conflict management. At the most basic level, effective learning calls for the development of critical thinking skills. Young people whose language skills and analytic abilities have been well developed in the classroom are likely to think before striking and use words instead of force to persuade (Prothrow-Stith & Weissman, 1991). An important key component of Project FREE is the use of an adult to model appropriate nonviolent methods for managing conflict. Research has "shown that schools with low levels of violent behavior are distinguished from those with high levels by a positive school climate where nurturance, inclusiveness, and community feelings are evident. Students who feel recognized and appreciated by at least one adult at school will be less likely to act out against the school ethos of nonviolence" (Walker, 1994, p. 4). While Caulfield
(2000) presents recommendations for creating a peaceable school, there is little more than theoretical evidence supporting his school plan. Statistical validation is needed to allow for more rigorous evaluation of Project FREE.

Other researchers also offer school staff and teachers strategies for creating a positive school climate. Stipek, de al Sota, and Weishaupt (1999) present a set of alternative prevention strategies to address the risky behavior of adolescence (violence, alcohol/drug use, and promiscuity). Their approach embeds a prevention program into everyday classroom activities and the basic academic instructional program, attempting to equip students with strategies for resisting high-risk behavior while enhancing their interests and engagement in basic skills instruction. They assert that students are more likely to incorporate the ‘life lessons’ taught to them in this non-traditional approach than they would be in a more formalized, structured prevention program. Stipek and her colleagues (1999) state that it becomes the responsibility of the teacher to create a “safe classroom” promoting an “academic discussion of risk-taking behaviors, thus fostering a sense of safety and security within the confines of the school environment” (p. 440).

While Stipek et al. (1999) provide theoretical support for their non-traditional violence prevention techniques, no empirical data or support is given. Thus the efficacy of utilizing such an approach is questionable at best.

The major limitation of the above-mentioned studies is that they do not examine, specifically, just how positive student-teacher interactions affect the school climate with respect to promoting feelings of safety and security. Nor do they provide adequate empirical support for their claims. They simply offer suggestions and guidelines for developing a positive school climate. From their work however, it can be deduced that
teachers, faculty and other school staff are charged with serving as positive role models to their students to demonstrate appropriate, nonviolent means of managing conflicts and the creating of feelings of classroom safety and security. This, in turn, creates an environment free from fears and/or threats of violence enhancing the teaching/learning climate. More research is clearly needed in this domain.

*Specific locations in the school environment.*

Intuitively, it appears as though providing students with a sense of safety and security in the school environment would require that students feel safe in a variety of locations on school grounds. Yet, little research exists examining the nature and quality of the relationship between specific school locations as a function of developing a sense of students’ safety and security within their academic environment (Arndt, 1994). Several researchers have begun to examine this topic. Their preliminary findings have demonstrated that safety and security in the school environment hinges upon creating an appealing and pleasant physical environment (Walker, 1993; Wheeler & Stomfay-Stitz, 2000).

In a study examining methods for preventing school violence, Walker (1993) concluded that creating an appealing, non-institutional school building can contribute to creating a positive school climate. Utilizing data from the National League of Cities Survey (Arndt, 1994), Walker (1993) reported that promptly repairing vandalism and demonstrating care for the aesthetic appearance of the school discourages further vandalism. Providing students with the opportunity to become involved with the beautification of the school grounds and the building fosters feelings of ownership and community. While Walker’s (1993) conclusions speak to the importance of attending to
the physical atmosphere of the school as a means of promoting a positive school climate that fosters students’ feelings of safety and security, they do not provide specific empirically validated strategies or plans to improve the school climate. Undoubtedly, considerable research is needed.

Similarly, many states have developed Safe School Plans to assist administrators and faculty to develop models for creating positive academic environments. Safe School Plans have developed in a reactionary fashion to address the recent increase in school violence. For example, The Capital Region Safe Schools Task Force (1996) in Albany, New York, developed a Safe Schools Model Plan to answer the question: “How are we going to stop the violence erupting in our schools and communities?” (p. 1). This model includes information regarding the practice of early intervention via instituting violence prevention programs. An integral part of the plan also provides teachers and administrators with ideas on how to “create a peaceful environment within which our children can grow and learn” (The Capital Region Safe Schools Task Force, 1996, p. 3). Suggestions for a peaceful environment include designing “open” seating plans to foster positive student-student and teacher-student interactions; encouraging student involvement in classroom and school-wide decorating including designing bulletin boards and hallway murals; and allowing students to function as locker room/hallway monitors to police crowd movements. While this plan incorporates measures of security and student/teacher involvement, no empirical evidence is offered to suggest the effectiveness of these strategies in providing for, or contributing to a sense of student safety and security within specific locations on school grounds. From the information presented here, it can be concluded that a student’s sense of safety and security within the
academic environment is related to their perception of security within specific locations of the school. While this 'plan' may seem to have its merits, considerable research is needed to provide outcome data supporting its continued use and its contribution to the decrease in violence on school grounds. It is clear from the information presented in this section that the literature to date has failed to be data driven. More research is needed to assist educators and administrators in discovering effective ways of improving the school's physical environment as a means of promoting a positive school climate.

Peer interactions.

The idea of creating a safe school environment also includes improving the peer interactions of the students (Wheeler & Stomfay-Stitz, 2000). The environment of the school provides a place where social and interpersonal relationships develop among the students. It has been postulated that peer relationships represent an integral part of the environment contributing to the personal and social climate of the school (Wheeler & Stomfay-Stitz, 2000). Thus, the promotion of a school climate where students feel safe and secure is related to the development and establishment of positive peer relationships among students.

In a study examining the relationship between moral reasoning and six dimensions of peer relationships during adolescence, Schonert-Reichl (1999) discovered that positive peer interactions in the school environment foster prosocial behaviors. A total of 108 adolescents (54 girls and 54 boys), ages 10 to 13 years of age completed sociometric measures of acceptance, peer behavioral assessment, friendship, social participation, and the moral reasoning (Schonert-Reichl, 1999). The sample was relatively homogeneous:
82% Caucasian. Gender differences were explored to assess the differing effects of peer relationships on boys and girls.

Multiple regression analyses were conducted to discover the contributions of peer group variables (prosocial, antisocial, and withdrawn behaviors—defined as social behavioral indices) to moral reasoning. Schonert-Reichl (1999) established that the development of moral reasoning according to Kohlberg's model was affected by the quality of early adolescent peer relationships and, one's attitudes and behavioral expression of morals. For girls, the measure of prosocial behaviors remained a significant, independent predictor of moral reasoning with all other variables controlled ($\beta = .44, p < .05$). For boys, the measures of prosocial and antisocial behaviors were both significant, independent predictors of moral reasoning ($\beta = .43, p < .05$, and $\beta = .43, p < .05$, respectively). Additionally, for boys and girls, moral reasoning was found to be significantly and positively associated with the number of close friendships, $r = .24, p < .05$ and $r = .23, p = .05$, respectively.

The results of this study indicate that involvement with a peer group affects moral reasoning skills of early adolescents. Similarly, the findings suggest that there exists a positive relationship between the number of friendships and development of moral reasoning skills in this cohort. The results of this study indicate a positive relationship between prosocial behaviors and moral reasoning for girls and boys. Yet for boys, there appears to be a negative relationship between antisocial behaviors and moral reasoning. This suggests that boys who engage in antisocial behaviors are less likely to develop moral reasoning skills.
A flaw of this study is its failure to specifically examine the effect that positive peer interactions have on the development of a sense of safety and security within the school environment. The differences between adolescent boys and girls with regard to the development of peer relationships are highlighted. However the study design is correlational. The relationship between the development of peer relationships and school climate perceptions is not clear. Thus, firm conclusions about the causes and effects of peer relations, friendships, and the school climate cannot be made.

Additional studies have examined the relationship between causes and effects of peer interactions and school climate. For example, in an examination of strategies to create a peaceful classroom, Wheeler and Stomfray-Stitz (2000) found that promoting positive student interactions and opportunities for cooperative learning provided students with the opportunity to engage in more positive personal interactions. This, in turn, translated into a classroom that reduced the number of interpersonal conflicts and promoted the healthy development of peer relationships. Although this study provided useful information into strategies that provide for the development of positive peer interactions in the classroom, the larger context of the entire school environment was left unexamined. In addition, the results and conclusions of Wheeler and Stomfray-Stitz (2000) were based on classroom teachers’ observations and the researchers’ failures to provide empirical support for their claims. While the information may be useful in the beginning stages of research and for teachers and educators in planning to provide academic environments that are safe, more statistical validation is needed to offer proven strategies and techniques aimed at school-violence reduction.
The information presented above has examined the school climate in terms of its specific components including the school staff, specific locations in the school environment, and peer interactions. It becomes clear that minimal research exists examining these specific aspects of the school environment. While defining the school climate in this manner is helpful in discerning the specific contributions of each of these facets, examining the environment of the school in a broader context provides for a richer understanding of adolescents' perceptions of their school climate and its effects on behavior. Examining the school climate in a broader context provides some additional information on this topic.

Kuperminc, Leadbeater and Blatt (2001) utilized a broader definition and defined the school climate as “the quality and frequency of interactions among and between adults and students” (p. 140). They suggest that the negative psychological changes experienced by many adolescents are “associated with a developmental mismatch between the needs of these adolescents and the opportunities afforded them by their school environments” (p. 143). Kuperminc, Leadbeater and Blatt (2001) examined the individual and combined contributions of psychological vulnerabilities and perceptions of the social-emotional climate of the school to discover the emergence of emotional and behavioral problems during the middle school years. Utilizing cross-sectional and longitudinal data from a diverse middle school sample, they examined the individual and interactive effects of school climate perceptions and concerns with self-definition and interpersonal relatedness as predictors of internalizing and externalizing problems.

The participants were 230 female and 230 male sixth and seventh graders (ages 11-14 years). Caucasian students comprised 50% of the sample; 26% were Hispanic, 21% were
African American, and 3% were Asian. The Youth Self Report was used to measure internalizing and externalizing problems and the Depressive Experiences Questionnaire for Adolescents was used to assess adolescents' psychological vulnerabilities, including interpersonal concerns, self-criticism, and efficacy. Perceptions of the school climate were measured using the School Climate Scale. School records provided demographic data on the study sample. The measures were given to students at the beginning of Year 1 and at the end of Year 1.

The results of the MANOVA reveal significant effects for gender and time on psychological vulnerabilities. Girls reported more interpersonal concerns than boys, $F(1, 458) = 58.18, p < .001$. Boys reported higher self-criticism than girls, $F(1, 457) = 5.26, p < .05$. Additionally, girls reported higher levels of internalizing problems, $F(1, 458) = 13.53, p < .001$, and boys reported more externalizing problems, $F(1, 458) = 7.23, p < .01$.

The results indicate that gender differences exist regarding the effects that positive perceptions of school climate have internalizing and externalizing problems. Regression analyses explained 53% of the variance in internalizing problems. The effect of internalizing problems on school climate perceptions was significant for girls, $\beta = .08, p < .05$. Whereas for boys, the effect of a positive school climate was significant for boys, $\beta = .06, p < .05$.

These results suggest that the different dimensions of students' school climate perceptions appear to be a factor in an adolescent's global sense of the school climate. In addition, gender differences with regard to the perception of the school climate affect the psychological vulnerabilities to which this cohort is susceptible. The researchers
concluded that “interventions to improve the social climate of schools may need to have a broad focus on interpersonal and procedural dimensions” including gender-specific considerations (Kuperminc, Leadbeater, & Blatt, 2001, p. 156).

While this study utilized an ethnically diverse sample, an examination of the effects of culture and ethnicity on perceptions of school climate was not completed. Similarly, although this study provided information regarding gender differences and the perception of the school climate, it did not provide long-term follow-up data regarding the developmental changes of adolescents’ perceptions as they continue through the high school years.

This section provided information regarding the school climate/environment. Continued research uncovering the relationship of the school climate and school violence is clearly needed. However it appears that there are a number of aspects of the academic environment that is, the school staff, specific locations in the school environments and peer interactions that affect a student’s social-emotional functioning. Ethnic and cultural issues with regard to the school climate/environment have not been thoroughly examined in the literature. (Additional research and information regarding culture and ethnicity will be presented later.) There does, however, appear to be some differences between gender with regard to the school climate/environment. Boys appear to be more sensitive to changes and alterations in the academic climate and are more likely to respond to these changes through externalizing behaviors (Kuperminc et al., 2001; Schonert-Reichel, 1999). Therefore, the possibility exists that boys’ externalizing behaviors could result in school violence. As such, researchers and educators would benefit from acknowledging the gender differences in response to the school climate and implement strategies and
interventions designed to address gender differences with regard to the academic environment.

Anger

Anger is a concept that has received much attention in the psychological literature. It has been described as an emotion that arises in response to a perceived threat to an individual’s psychological well-being (Beck, 1999; Novaco, 1975). There are several lenses through which to view anger including physiological, cognitive, and behavioral. This section serves to introduce and summarize the literature, and theories of anger and its expression as it relates to violence in adolescents. Gender and ethnic/cultural considerations will also be presented.

A variety of physiological components and pathways have been implicated in the expression of anger. The physiological responses have come to be referred to as the "fight or flight" response and include sweating, inhibition of stomach and intestinal contractions, increased respiratory rate, increased heart rate, constriction of peripheral arteries and dilation of the arteries feeding the brain and large muscle groups, and release of glucose from the liver (Graham, 1990). Although the affective experience of anger is unique to humans, animal research examining the expression of aggression has proven useful in understanding human aggressive behavior (Graham, 1990). It has been found that there are seven different types of aggressive behavior common in animals: 1) irritable; 2) maternal; 3) predatory; 4) inter-male; 5) instrumental; 6) fear-induced; and 7) sex-related. According to Graham (1990) each of these types of aggression can be traced to specific neural pathways. However, research has not demonstrated this link in
humans. The type of aggression most similar to what is expressed in humans is irritable aggression which occurs as a response to frustration, pain, or deprivation.

The physiological components of anger were first published in 1890 under the guise of the James-Lange theory of emotion (James, 1990). This theory dictates that the bodily sensations that occur secondary to a perceived threat are the emotion themselves. Thus, cognitive mediation is not necessary. However, Lazarus (1984, 1991) countered this theory noting that cognitive appraisal is a necessary component in the production of emotions. According to Lazarus, even when it appears as though cognition is absent in emotional expression there are automatic preconscious cognitive processes at work.

Beck (1999) posited that anger is mediated by a set of cognitive processes:

```
Event/Situation
  ▼
Experience of loss/distress/fear
  ▼
Perception of having been "wronged"
  ▼
Shift of focus to the "offender"
  ▼
Mobilize attack/restore balance of power. (p. 31)
```

Beck (1999) states that ‘faulty beliefs’ can exacerbate the loss/distress/fear experience, that is, “if somebody doesn’t show me respect, it means I appear weak” (p. 32). These cognitive distortions may lead to the expression of anger or aggression when one aligns with his or her “primal beliefs,” defined by Beck (1999) as “beliefs that we consider vital to our existence or identity” (p. 32). As a primal belief, mobilization to attack may be initiated by thoughts such as “I am going to beat him up if he disrespects me.” In examining the causes of domestic violence, Beck demonstrated this line of thinking and posited that the spouse’s low sense of self-esteem is threatened by the victim’s perceived
oppositional or disrespectful behaviors. This cognitive distortion leads to mobilization of anger in the form of physical aggression (Beck, 1999).

A form of cognitive distortion that has been found to be related to anger and violence is hostile attributional bias. In a study of African-American male adolescents, Hammond and Yung (1993) presented a public health framework for examining the problem of assaultive violence among this population. They postulated that this model allows for public health workers and researchers to consider the personal, social, and cultural factors that are likely to contribute to the occurrence of assaultive violence. A flaw of this research is that it is not empirical in nature. However, it reviews the major conceptual approaches and empirical literature related to the topic of assaultive violence among African Americans. This provides the readers with a multi-pronged approach in examining violence in this population of adolescents. In their review of the literature, Hammond and Yung (1993) concluded that those adolescents whom peers view as aggressive are more likely to engage in violence in response to feelings of anger. This group of adolescents is also likely to see other’s intentions as more malevolent, thus providing further justification for their aggressive response to provocation. Similarly, they suggested the existence of a positive correlation between hostile attributional bias and the number of interpersonal violent crimes committed indicating that cognitive distortions are likely to influence the expression of anger in physically assaultive ways.

Beliefs that aggression is an effective way to express anger may result from early socialization and environmental experiences. Bandura (1973, 1986) has argued that the external environment contributes, in large part, to acquiring and maintaining aggression. Students learn from role models, including adults and peers, to use aggressive means to
achieve their goals. Similarly, Graham and Hundley (1994) examined a group of 156 African-American boys in grades 6 through 8; half were considered aggressive, half were considered non-aggressive. When presented with ambiguous vignettes with non-aggressive explanations of the character's behaviors, the aggressive adolescents responded with more severe judgments and punishments, $F(6, 296) = 2.69$, $p < .05$. The researchers attribute the aggressive boys' responses to their internalization of a "chronically accessible construct," that is their early life experiences with adults resulted in continual blame and the creation of a belief structure in which hurt or injury was intentional. Thus, these children had in their cognitive repertoire a means of responding to a perceived threat that was more accessible than alternative cognitive and behavioral responses (Graham & Hundley, 1994).

Graham and Hundley's (1994) study suggests the existence of a chronically accessible construct involved in aggressive boys' responses to ambiguous social suggestions. However, they fail to examine other variables that may have impacted the boys' responses including mood and the perception of negative traits in their peers. Additionally, ethnic differences were not examined. Graham and Hundley (1994) also failed to examine the presence of a chronically accessible construct with stimuli that are more positive, such as the development of peer relationships. This would be important to study as a means of uncovering the impact of social cognitive processes on both aggressive and non-aggressive behavioral responses.

While not comprehensive, this section introduced the concept of anger. Related to anger is the concept of anger expression. As mentioned throughout the present study, schools have been experiencing an increase in violence, and have begun to institute
violence prevention programs. Many prevention programs including Project Peace include efforts to reduce and/or redirect high levels of anger (de Anda, 1999; Smith, Furlong Bates, & Laughlin, 1998). From the information presented thus far, it can be deduced that anger expression is likely to be related to school violence such that a student’s affective discharge may take the form of violence. The two sections that follow will present information related to the expression of anger including gender and ethnic differences.

Anger and gender differences.

Gender differences with regard to the expression of anger are well documented in the literature. It is commonly accepted that males and females do not differ in the levels of anger they experience (Sharkin, 1993; Stoner & Spencer, 1987). However gender differences in attitudes toward anger and aggression (Harris, 1996; Harris & Knight-Bonhoff, 1996; Locke & Richman, 1999) and in styles of anger expression (Kopper, 1993; Kopper & Epperson, 1996) have been found to exist. While females and males may experience equal levels of anger, males’ anger expressions are more likely to be physical. Females are more likely to internalize their anger in the form of anxiety and depression (Farrell & Meyer, 1997). Crime statistics support these findings (NCVS, 1992) noting that males account for nearly 90% of all incidents of violent assault, robberies, and murders. These gender differences appear to be recognizable in children and adolescents as well (Farrell & Meyer, 1997; Feindler, Marriott, & Iwata, 1984).

In general, theories of anger suggest that anger is primarily a masculine emotion and, as such, is consistent with the masculine gender role (Kopper & Epperson, 1996). Conversely, women’s anger is rarely addressed by ancient and medieval philosophers
except for recommendations that wives not quarrel, but respond with meekness to their husbands’ anger (Davila, 1999). More recently, Kemp and Strongman (1995) posited that anger continues to be perceived as a masculine emotion necessary for male success in personal, professional and political roles. However, for women, anger continues to be perceived as unfeminine and unattractive, thus requiring suppression, especially within personal and domestic roles (Davila, 1999). Research has demonstrated that gender role socialization encourages anger expression in males and anger suppression in females (Davila, 1999; Kopper & Epperson, 1996; Newman, Gray & Fuqua, 1999).

As previously noted, anger suppression in females has been linked to anxiety, depression low self-esteem and somatization including headaches, overeating and obesity (Farrell & Meyer, 1997). An examination of the mechanisms involved in gender differences in anger expression and suppression is necessary here as the psycho-social health of males and females is likely to be affected by the experience of anger.

Newman, Gray & Fuqua (1999) conducted a study to examine sex differences in the relationship between anger and depression. Drawing upon the psychoanalytic notion that “depression is anger turned inward” the researchers sought to uncover the causal relationship between anger and depression (Newman, Gray, & Fuqua, 1999, p. 198). The study was designed to answer several questions related to anger, depression and sex: 1) Are men and women significantly different on mean levels of anger and depression? 2) Is the experience/expression of anger significantly correlated with a measure of depression for men and women as a combined group? 3) Is a linear combination of anger scales significantly related to depression for men and women as separate groups? 4) Is there a difference in the strength of relationships between depression and anger scales for men
and women? and 5) Is the internalization of anger related differently to state and trait anger, and are the relationships different for men and women? (Newman et al., 1999).

To find the answers to their research questions, Newman et al. (1999) utilized a sample of 395 undergraduate students from a large southwestern university. A total of 226 women and 169 men participated. The average age of the participants was 19.7 years. The sample was 74% White/Caucasian, 9% African American, 7% Asian, 5% American Indian, and 3% Hispanic (2% did not report their ethnicity). Participants completed the State-Trait Anger Expression Inventory and the Beck Depression Inventory.

The results of the Hotelling's $T^2$ revealed that the scales of the mean vectors of State-Trait Anger Expression Inventory, and the Beck Depression Inventory were significantly different, $F_{exact} (7, 387) = 2.38, p < .05$. Univariate $t$-tests demonstrated that there were no significant differences between women and men on any of the State-Trait Anger Expression Inventory scales. However, there was a statistically significant difference between women and men on depression ($t = 2.27$, $p < .05$) with women reporting higher mean depression scores ($M = 8.79$) than men ($M = 7.12$). Additionally, the Beck Depression Inventory was found to correlate significantly with all anger scales except Anger-Out ($r = .14$, $p = \text{ns}$). Correlations among the anger scales were in the low to moderate range, $r = .20$ to $r = .59$.

Newman and colleagues (1999) indicated that these findings suggest that as a group, women are more depressed than men. However, their results also suggest that gender differences in the experience or expression of anger are low to moderate. The researchers concluded that in “examining the relationship of anger internalization to
depression...internalized anger plays a more prominent role in depression among women” (p. 200). These findings indicate that while women and men appear to experience similar levels of internalized anger, women may be more likely to convert it to depressive symptoms than men.

Newman et al. (1999) also found that for both men and women, there was a statistically significant relationship between the linear combination of the anger scales and depression. In the multiple regression equation, Anger-In and State Anger scales were entered first and second, respectively, for both the woman’s and men’s groups. The results indicate that 38% ($R^2 = .38, p < .001$) of the variance in the Beck Depression Inventory was found to be in common with a linear combination of the six State Trait Anger Inventory scales for women participants. However for men, this same figure was found to be 26% ($R^2 = .26, p < .001$). While these findings suggest that differences between the sexes may exist for depression and anger, inferences about causality cannot be made. Continued research in this domain is needed.

Newman et al. (1999) also sought to demonstrate sex differences in the relationship between anger and depression. $Z$ tests comparing zero-order correlations of the six anger scales with depression for men and women were computed to determine sex differences with regard to anger and depression. A total of 11 of the 12 correlations between the scales of the Beck Depression Inventory and the State-Trait Anger Expression Inventory were significant. However only the correlation coefficients for the Anger-In scale were significantly different between the groups, $z = -2.06, p < .05$. The Anger-In scale and depression shared 27% of the variance for women, but only 12% of the variance for the men.
Correlations of the Anger-In scale with the remaining five anger scales were computed for men and women. For women, the Anger-In scale had a statistically significant correlation with State Anger \((r = .32, p < .05)\), Trait-Anger-Temperament \((r = .28, p < .05)\), Train-Anger-Reaction \((r = .40, p < .05)\) and Anger-Out \((r = .17, p < .05)\). However for men, only Trait-Anger-Reaction was statistically correlated with Anger-In, \((r = .30, p < .05)\). Newman et al. (1999) suggested that this may reflect a tendency for “Anger-In to be a broader aspect of the anger experience for women” (p. 200).

The results of this study demonstrate that there is a functional affective difference between men and women with regard to anger and depression. Newman et al. (1999) found a relationship between internalization of anger and depression among women providing further support that anger expression differs between men and women. One of the weaknesses of this study is that the results were correlational making inferences about causality impossible. Additionally, there were unequal samples of men and women participants thus between group comparisons must be done with caution. Furthermore, the generalizability of these findings are limited to college students of a relatively homogeneous population as the sample used by Newman and colleagues was predominantly, 74%, White/Caucasian.

Recent qualitative research has also demonstrated the existence of gender differences with regard to the expression of anger. Dittmann (2003) reviewed current studies aimed at disentangling men and women’s experiences of, response to and expression of anger. She concluded that socialization practices have had a significant impact on males and females expression of anger. Where boys are traditionally encouraged to express their anger in overt, physical ways such as fighting, girls are
encouraged to react to anger-producing situations in more passive ways resulting in passive-aggressive behaviors including pouting, sulking, and gossip (Dittmann, 2003).

Milovchevich, Howells, Drew and Day (2001) sought to examine the socialization factors involved in gender differences with regard to anger expression. Milovchevich and colleagues (2001) analyzed the differential effects of participants sex (male and female) and gender role identity (masculine, feminine, androgynous and undifferentiated) on dependent measures of anger (trait and state anger, anger expression and control), and examined these effects across different situations when the sex of the participant was manipulated. Participants were 361 Australian adults (females, n = 203; males, n = 158). The participants completed the State-Trait Anger Expression Inventory, the Personal Description Questionnaire and were shown a vignette designed to induce anger. The sex of target characters in the vignette was manipulated producing a total of four different vignettes. Participants were also asked to complete a State Anger Measure to assess their expression of anger in response to the vignette they viewed.

Findings reveal that the gender role identification of participants did significantly affect expression of anger. A 2 X 4 (sex X gender identification) MANOVA revealed that there was a significant main effect for gender role, $F(3, 349) = 6.47, p < .00001$. No other significant main effects for sex or interaction between sex and gender role was found. Univariate analyses were used to examine the impact of gender role identification on measures of trait anger. Significant results were found for anger control, $F(3, 349) = 4.97, p < .002$, anger in, $F(3, 349) = 3.96, p < .008$, anger out, $F(3, 349) = 20.24, p < .0001$, and trait anger, $F(3, 349) = 23.33, p < .0001$. 
Milovchevich et al. (2001) hypothesized that one's sex would not significantly influence measure of trait anger or interact with gender role identification. As reported above, their findings support this hypothesis. Gender role identification was the only variable found to have a significant effect on measures of trait anger. Post hoc comparisons revealed that participants who classified themselves as adopting a masculine gender role reported higher levels of trait anger (M = 21.29, SD = 5.35) and outward anger expression (M = 16.52, SD = 3.95) in comparison to those participants who identified themselves as adopting a feminine gender role (M = 16.90, SD = 3.64 and M = 13.43, SD = 3.00, respectively). Additionally, participants who classified themselves as adopting a feminine gender role expressed anger inwardly (M = 16.69, SD = 3.98) and exercised higher levels of anger control (M = 24.97, SD = 4.52) than their masculine counterparts (M = 16.30, SD = 3.65 and M = 22.43, SD = 5.00, respectively).

Milovchevich et al. (2001) also found that those who classified themselves as androgynous reported high levels of trait anger (M = 23.21, SD = 4.73), outward anger expression (M = 16.39, SD = 3.60) and greater anger control (M = 23.21, SD = 4.73).

They concluded that gender role identification, not sex, is important in affecting an individual's anger expression. Milovchevich et al. (2001) suggested that further research is needed in this area to disentangle the socialization and relational factors that impact the expression and/or control of anger.

A strength of the study was its attempt to examine anger expression and control from a gender-role perspective acknowledging the impact of one's environment on affective development. The researcher's used a large sample and an experimental design lending reliability and validity to their findings. However, there were unequal groups of
male and female participants. Thus comparisons between groups should be made with caution. Additionally, the sample was comprised of Australian adults; cultural and ethnic variables may have contributed to the findings making comparisons to American adults difficult.

The findings presented thus far support the theoretical notion that anger expression differs between men and women; men appear to express anger outwardly, while women are more likely to internalize or control their angry feelings. Similarly, anger is likely to be suppressed by women resulting in depression. However, since the present study examined a sample of adolescent participants, information related to anger expression among this age cohort is necessary to review.

Cox, Stabb, and Hulges (2000) examined the relationship between anger and depression in a sample of 161 elementary middle and high school students enrolled in an urban southwest state (41.6% African American, 27.9% Latino, 26.7% White/Caucasian, 3.7% Asian, and .6% “other”). The total sample consisted of 101 girls and 60 boys drawn from grades five through nine. Cox et al. (2000) hypothesized that anger suppression would contribute to depressive symptoms among girls and that girls would suppress anger at higher levels than boys. Additionally, girls were expected to report higher rates of depression than boys, with older girls demonstrating more depressive symptoms than younger girls. Anger suppression was expected to relate positively to depression in both boys and girls of all age groups.

To test their hypotheses, Cox et al. (2000) had the participants complete the Pediatric Anger Expression Scale III and the Children’s Depression Inventory. Results revealed only a significant main effect for gender, $F$ Approx. = 3.76 (5, 153), $p = .003$. 
Post hoc analyses demonstrated that Anger-in, $t(159) = 3.73, p = .001$, and Anger-control $t(159) = 2.11, p = .037$, were the primary contributors to the significant main effect for gender. Cox et al. (2000) found that regardless of age grouping, girls scored significantly higher on Anger-in and Anger-control than boys. Additionally, boys were found to score higher on Anger-out than girls across the age groups, $t(159) = -3.19, p = .002$.

To test their hypotheses concerning gender and age-group differences on depression, Cox et al., completed a 2 (age grouping) X 2 (gender) analysis of variance. Results revealed no significant main or interaction effects. No significant correlation was found between Anger-in and depression, $r = -.02, p = .420$.

As predicted, Cox et al. (2000) found that girls were more likely to suppress or control anger than boys. This is consistent with adult findings (Newman et al., 1999). However, at all ages, girls were no more prone to depression than were boys. Cox and colleagues suggest that this finding indicates that internalization of anger by young girls may manifest itself differently in older women and that continued developmental research in this domain is needed.

Cox et al. (2000) also examined their findings in a cultural/ethnic context. In explaining the “the lack of correlation between suppressed anger and depression,” Cox et al. (2000, p. 111) suggested that given the ethnic makeup of the sample studied, the results may be “related to differences in the ways White girls and Black girls construe their relational worlds and act within them” (Cox et al., 2000, p. 111). They reported that adolescent girls of color are more likely to outwardly express their feelings, as they view such expression as necessary to staying connected with others and to defending a sense of self. Thus, the possibility exists that although girls may hold back their feelings of anger
more often than boys, ethnicity may play a role in shaping what is expressed and how it is expressed.

Cox et al. (2000) concluded that their results demonstrate that girls endorsed the gendered option for anger expression using more internalized means than boys, namely suppression and control. While depression measures failed to yield the expected anger suppression effects, the results of this study highlight possible behavioral “precursors to depression in girls and women and accent the importance of developmental models that address girls’ anger, ethnicity, and the involvement of both in their gender socialization” (Cox et al., 2000, p. 112). The results of this study must be interpreted with caution, however, since there were unequal groups of male and female participants making comparisons between groups difficult. In addition, Cox et al. (2000) reported that small prizes were given to the students who returned parental consent, therefore it is likely that the Hawthorne Effect may have affected the results of this study.

Additional studies supporting gender differences in anger expression among school-aged children and adolescents have been conducted. Underwood, Hurley, Johanson, & Mosley (1999) completed a study utilizing an experimental, observational method designed to examine anger expression during middle childhood. The primary goal of the investigation was to develop an experimental, observational method to investigate gender and developmental differences in response to provocation by a peer. The participants in the study were 382 children, 198 boys and 184 girls. The children were observed in play sessions in the summer after their second-, fourth-, and sixth-grade years (with approximate average ages of 8, 10, and 12 years). Numbers of boys and girls per grade level were: 67 boys and 68 girls in second grade, 67 boys and 70 girls in fourth grade,
and 64 boys and 46 girls in sixth grade. The sample was generally homogenous: 85.2% European American, 6.4% Asian American, 4.5% Hispanic American, 2.2% African American, and 1.6% Native American.

Underwood et al. (1999) hypothesized that during middle childhood (ages 8 through 12), boys would be likely to express anger more openly than would girls, but that gender differences would begin to decrease in the oldest age group (sixth graders). Another goal of the research was to examine the developmental differences in anger expression during middle childhood. Underwood and colleagues (1999) stated that based on developmental research, younger children were expected to have more trouble regulating affect than were older children. Specifically, younger children would respond with more intense negative facial expressions and negative verbal statements. The researchers expected older children to be “more skillful at maintaining composure and masking anger...because they have had longer to be socialized to norms prohibiting open anger expression” (Underwood et al., 1999, p. 1431).

The children were invited to play a computer game with another child of the same age, whom they thought was another participant but was a child actor working with the investigators. In an initial practice session of the computer game, the actor was instructed not to make provoking responses to the participants. After five minutes of practice play, the researchers informed the children that there was to be a contest to determine who the best player was. During the ‘contest’ portion of the game, the child actors were instructed to make provoking responses, designed to elicit anger, towards the participants. Observations during this phase were completed by the researchers to examine facial expressions and verbal responses indicative of anger. The participants
also completed an After Game Questionnaire to assess the children’s self-reported responses to the provocation immediately following the game. The questions were designed to secure information about the participants’ emotional responses, perceptions of the game and the actor, use of display rules, coping strategies, and social goals during the play/peer interactions.

Underwood et al. (1999) found a significant difference between boys and girls in the verbal expressions of anger in response to peer provocation, $F(1, 380) = 25.47, p < .001$. However, proportions of angry facial expressions were found to be identical for boys (.05) and girls (.05). Outward expression of anger were found to decrease significantly with age, $F(2, 379) = 3.85, p < .05$. Children in the sixth grade were found to display lower mean proportions of angry verbal responses in reaction to peer provocation than children in the second grade, .09 and .13 respectively. No differences in angry facial expressions were found as a function of grade level.

Overall, the findings of this study provide support for sex differences with regard to outward expression of anger; boys tend to respond to provocation by a peer via engaging in verbally aggressive behaviors when compared with their female counterparts. This is in line with the aforementioned studies that found gender differences in anger expression in adult populations. However, Underwood et al.’s (1999) results also indicate that the outward discharge of anger is likely to decrease with age during middle childhood. Therefore, the factors that affect how anger expression in adolescents and older adults evolves and changes over time needs to be more thoroughly examined.

A strength of Underwood et al.’s (1999) study was use of a large sample size. The researcher’s also contributed additional support for the theory that anger is expressed
differently between boys and girls. However, the observational and laboratory design of the study calls into question the applicability of the findings to real-world interactions between children and their peers in the natural environment. Similarly, the inter-rater reliability of the observations of the adult coders of the children's facial expressions and verbal responses was not provided. This calls into question the reliability of the findings. In addition, the generalizability of the findings is limited to primarily Caucasian children.

Thus far, the studies presented in this section have highlighted the sex/gender differences with regard to the expression of anger. Generally speaking, males are more likely to express their anger outward, while females are more likely to suppress or control their anger. Similarly, females have been found to internalize their anger as manifested in depressive symptoms. These gender differences have been found to be consistent for both adults and children. However, the question remains: how is anger expression related to school violence?

Underwood et al. (1999) reported that anger expression among male children in response to peer provocation is likely to occur in the form of outward verbal expression. This suggests that school-aged boys may respond to conflictual situations with peers in adverse ways including verbal altercations. Yet the relationship between anger expression and school violence still remains unclear. School violence has been demonstrated to be a complex issue with multiple causal pathways. It has been postulated that one potentially important variable related to school violence is the high degree of anger and hostility existing among some students (Fryxell, 2000). To examine this hypothesis, a recent study was conducted by Fryxell (2000) to examine potential
causal factors affecting students who display high levels of anger toward the school environment.

Fryxell (2000) reported that school-aged children and adolescents who are identified as manifesting high levels of anger and hostility at school appear to be at risk for a number of behavioral, social, academic, and physical concerns. Past research has demonstrated that angry students are likely to engage in substance abuse, delinquency, interpersonal difficulties, vocational and school-related problems, and other maladaptive behaviors (Deffenbacher, Lynch, Oetting, & Kemper, 1996). In addition, Tolan, Guerra, and Kendall (1995) suggested that a multiple developmental-ecological perspective that includes both individual and interpersonal characteristics as well as contextual variables including cultural and community contexts is useful in examining maladaptive behaviors in students. Based on this past research, Fryxell (2000) collected descriptive data on personal, family, peer and school factors associated with students manifesting anger-related problems at school.

Participants were 24 high-anger elementary-aged students drawn from 12 elementary schools in Hawaii. A comparison group of an equal number of low-anger students was also used. Levels of anger were determined by teacher completion of the Behavioral Assessment System for Children-Aggression Scale and student’s completion of The Self-Perception Profile for Children. The 24 students in the high-anger group included 20 males and 4 females equally distributed between fifth and sixth grades. The mean age of participants was 10.5 years. The ethnic distribution of the participants was reported to mirror the composition of the community from which it was drawn and
included 6 Caucasians, 4 Pacific Islanders, 1 Native American, 1 Hispanic, and the remainder Asian Americans were of Japanese, Chinese, Korean, and/or Filipino descent.

The high-anger students were defined as those students who "displayed frequent emotional outbursts related to feelings of anger; demonstrated a consistent cynical, hostile, or angry attitude; or were involved in frequent incidents of fighting or acting out in an angry, aggressive manner" (Fryxell, 2000, p. 89). Low-anger students were defined as those students who rarely or never displayed these characteristics. All students were administered the Multidimensional School Anger Inventory which yields subscale scores in the domains of anger arousal, cynical hostility, and negative anger expression, and the Self-Perception Profile for Children. Students also completed a semi-structured interview designed to elicit information related to school experiences, friendships, perceptions of self, home environment, and specific anger experiences. Teachers were also required to participate in a semi-structured interview and complete the Behavioral Assessment System for Children-Aggression Scale. Parents of the high- and low-anger children were interviewed and asked to provide information in "response to semi-structured questions about family, demographics, students' developmental histories, social and leisure activities, anger experiences, and future expectations" (Fryxell, 2000, p. 89).

The results of the Multidimensional School Anger Inventory indicate that there is a moderate correlation between anger-related self-descriptions and overall scores on this measure, $r = .45, p < .05$. This indicates that students reporting high levels of anger at school also tended to characterize themselves as angry in other aspects of their lives.
Significant differences between the high- and low-anger groups were also found. Males comprised approximately 83% of the students in the high-anger groups, but only 33% in the low-anger group. These findings must be interpreted with caution, however, since the overall sample size was small and there were unequal groups of male and female participants. Fryxell (2000) reported that there were no differences in the ethnic composition of the high- and low-anger groups; equal numbers of the minority groups were found to manifest high or low levels of anger in school. Again, these results must be interpreted with caution in light of the small number of participants in each ethnic group. Fryxell (2000) indicated that qualitative information secured from the semi-structured interview supported quantitative findings; high-anger students acknowledged difficulty controlling and regulating their anger.

Familial factors were also found to be related to anger in students. Teacher reports of parental support and student anger level were significantly inversely related, $r = -.53, p < .05$. Qualitative data from the interviews supported these findings indicating that teachers rated the high-anger students' families to face a high number of significant challenges including economic, occupational and interpersonal conflicts.

With regard to peer relationships, significant inverse correlations were found between the Multidimensional School Anger Inventory scores and the number of friends students reported having at school, $r = -.32, p < .05$, and teacher ratings of social relationships, $r = -.64, p < .01$. Significant positive relationships were found between the extent of teasing and their level of anger, $r = .43, p < .05$, and between self-reported anger and the perceived anger level of friends, $r = .34, p < .05$. This latter finding implies that angry students at school tend to associate with like-minded peers.
Fryxell (2000) found a moderate, significant inverse relationship between
*Multidimensional School Anger Inventory* scores and school success as measured by
grade point average ($r = -0.71, p < 0.05$), school work habits ($r = -0.56, p < 0.05$), and school-
related personal and social attitudes ($r = -0.71, p < 0.05$). Additionally, a significant inverse
relationships between teacher and student ratings of academic ability and anger was
found, $r = -0.33, p < 0.05$ and $r = -0.36, p < 0.05$, respectively. Students who were in the low-
anger group were also more likely to be categorized as intrinsically motivated than were
students in the high-anger group, 42% versus 0% respectively.

Overall, the results of the Fryxell (2000) study support a conceptualization of
anger development in children “based on multiple pathways across four domains
including individual, school, family, and peer factors” (p. 92). The results of this study
indicate that the cumulative positive and negative experiences at home, in school and
with peers have a major impact on the frequency and intensity of anger experienced in
the school setting. This was made evident in the data such that those preadolescent
participants who had negative experiences and relationships across domains were also
more likely to experience high levels of anger. In addition, the results indicate that there
appears to be an additive effect across domains such that the negative experiences in one
domain have an impact on the relationships and experiences within other domains.

Fryxell (2000) concluded that school violence is likely to be related to anger
expression among preadolescents. It is likely that the multiple pathways and cumulative
effects of anger among this cohort could result in outward expression of anger in the form
of violence especially among males. Therefore, Fryxell (2000) suggested that prevention
programs targeted at this age and specifically at boys should be instituted in schools as a
means of avoiding potential incidences of school violence. The researcher noted that all children could potentially benefit from anger management programs that teach positive social skills and strategies for building and maintaining friendships with peers. "By learning proactive strategies, students could possibly prevent many angry and aggressive outbreaks, and learn to control and deal with their anger." (Fryxell, 2000, p. 92).

This study was important in that it examined the relationship between anger and school violence. Gender and ethnicity were examined, and anecdotal information was provided supporting quantitative findings. However, the very small sample size makes generalizability to other groups of students difficult. Similarly, the disproportionate sample of male (n = 20) and female (n = 4) participants limits the ability to make gender comparisons. No ethnic differences were reported however. The small number of ethnic participants (Caucasians, n = 6; Pacific Islanders, n = 4; Native Americans, n = 1; Hispanics, n = 1; Asian Americans n = 12-comprised of Japanese, Chinese, Korean and/or Filipinos) limits the usefulness of cultural findings. While Fryxell’s (2000) study was correlational and somewhat qualitative, the results indicate that there may be a relationship between school violence and anger. Continued research is clearly indicated in this domain.

This section sought to present the gender differences with regard to anger expression. It was established that males and females are likely to experience anger in similar ways. However gender differences appear to exist with regard to anger expression. While adult males are likely to endorse outward expressions of anger, adult females are likely to internalize or control their anger; they may also experience depression secondary to the internalization of angry feelings (Milovechich et al., 2001;
Newman et al., 1999). With the exception of depressive symptomology as an outgrowth of anger, gender differences in anger expression were found to be consistent in populations of school-aged children (Cox et al., 2000; Underwood, et al., 1999). Additionally, recent research (Fryxell, 2000) has suggested that there is a link between anger and school violence. This finding is important and needs to be researched further. Yet, it appears as though anger management strategies and techniques may be necessary in school violence prevention programs as a means of comprehensively addressing the issues that may impact the expression of anger in the school environment.

**Anger and ethnic/cultural differences.**

The above section examined the gender differences with regard to anger expression. The present study was also interested in examining ethnicity as a variable, thus a presentation of the ethnic and cultural differences related to anger is necessary.

Cultural and ethnic differences with regard to the expression of anger have been documented in the literature (Deffenbacher & Swain, 1996; Feng & Cartledge, 1996; Moisan, Sanders-Phillips, & Moisan, 1997). Research has demonstrated that in more collectivistic cultures including Japanese, Chinese, Tahitian, and Eskimo, the outward expression of anger is disapproved of as it violates the social group norms of peacefulness and unity (Haar & Krahe, 1999; Tanka-Matumi, 1995). In these cultures, violence and other expressions of anger are not tolerated. Individuals from more collectivist countries show more conflict avoidance than do those from individualist countries (Obuchi & Takahashi, 1994). Asians, particularly Chinese and Japanese, are thought to be constrained in their expression of anger especially in interactions with nonfamilial individuals (Lam, 1999). Yet, there is a dearth of literature examining anger
expression with Asian Americans. A review of the literature by the present researcher revealed that no studies to date have specifically examined the relationship between anger expression and school violence as it pertains to this population.

Despite the paucity of literature related to anger expression among Asian Americans, some related information is available. For example, in a study examining the social skills of culturally and racially different inner city youth, Feng and Cartledge (1996) concluded that Asian American students are more likely to internalize feelings of anger and aggression than their African American and Caucasian counterparts. They hypothesized that the social skills profiles among Asian, African and European American students develop differently. In this study, the phrase social skills was used to refer to the students behaviors in the classroom including internalizing and externalizing behaviors (such as anger and aggression) and hyperactivity. Feng and Cartledge (1996) utilized a sample of 122 inner city fifth graders: 30 Asian Americans, 42 African Americans, and 50 European Americans. Both teacher and student self-reports of the Social Skills Rating Scales were completed. Included in the Social Skills Rating Scales was a measure of problem behaviors including internalizing behaviors, externalizing behaviors, and hyperactivity.

Results revealed a significant difference between ethnic groups with regard to teacher ratings of social skills, $F (4, 238) = 12.91, p < .00001$. Asian and African American students differed significantly on the subscales of cooperation ($p < .014$) and self-control ($p < .012$), but not on assertion ($p < .981$). Asian and European American students differed significantly only on the subscale of cooperation ($p < .039$). No
significant differences were found on the three subscales between African and European American students.

In examination of the three social skills subscales of the teacher-report of the Social Skills Rating Scales, significant differences were found only for Asian American students. Teachers perceived their assertion skills to be significantly lower than their skills in the areas of cooperation ($p < .0001$) and self-control ($p < .0001$). No significant differences were found among the three social skills for African or European American students.

On the problem behaviors subscales of the Social Skills Rating Scales, there was a significant difference among ethnic groups with regard to problem behaviors, that is, internalizing, externalizing behaviors and hyperactivity, $F(4, 238) = 9.68, p < .0001$. Asian American participants received lower teacher ratings of externalizing behaviors ($M = .64$) than European Americans ($M = 2.64$) and African Americans ($M = 4.97$). Asian American participants also received lower teacher ratings of hyperactivity ($M = 1.91$) than European Americans ($M = 4.28$) and African Americans ($M = 5.94$). In addition, Asian American participants were reported to engage in more internalizing behaviors than their European and African American counterparts, $M = 16.10$, $M = 10.56$, and $M = 12.88$, respectively.

Feng and Cartledge (1996) examined their results in light of cultural influences on behavioral expression. They stated that the lower teacher ratings of Asian Americans on problem behaviors such as hyperactivity and externalizing behaviors can be conceptualized as a function of the Asian American collectivistic view that outward expression of anger and aggression disrupts the peacefulness of the larger group.
However, the Asian American participants internalizing behaviors are of concern as Feng and Cartledge (1996) proposed that these behaviors are likely to lead to stress, anxiety, depression, and poor peer interactions.

Although Feng and Cartledge’s (1996) did not directly examine anger expression among Asian American students, their study provides some evidence for the cultural influences on behavioral expression. The results indicate that Asian American students are likely to internalize their feelings of anger and the possibility exists that cultural dictates affects anger expression among this group. Feng and Cartledge (1996) noted that Asian Americans in their study were likely to internalize anger feelings. As mentioned above, internalization of feelings of anger has lead to depressive symptomology in adult women (Newman et al., 1999). Therefore the possibility exists that anger suppression among Asian Americans could lead to depression. Additional research examining these variables would contribute to the body of literature related to anger and Asian Americans.

The results of the Feng and Cartledge (1996) study must be interpreted with caution as the sample size was small. Similarly, generalizability is limited to inner city fifth graders making assumptions about the applicability of their findings to other groups questionable.

Additional research examining anger among Chinese adults has not revealed consistent findings with regard to the suppression or inward expression of anger. Lam (1999) sought to examine the relationship between anger and parental stress among a sample of Hong Kong Chinese parents. The study design was exploratory in nature as a means of discovering Hong Kong parents’ pattern of anger expression towards their children. While traditional, cultural mores and values of the Chinese culture dictate that
negative emotions be restrained, Lam (1999) was interested in discovering if anger expression varied in relational contexts, particularly the parent-child relationship.

The participants in the study were 475 mothers, fathers and caregivers of children in primary grades 1 through 6 living in Hong Kong city. Three standard scales were translated into Chinese and used in this study: 1) Abdin’s Parenting Stress Index/Short Form (PSI/SF), 2) State Trait Anger Expression Inventory (STAXI), and 3) Maternal Social Support Index (MSSI). A significant relationship was found between total scores on the STAXI and PSI/SF, \( r = .30, p < .0001 \). Lam (1999) noted that this confirms the influence of parenting stress on anger expression. A significant negative relationship was found between trait anger and social support, \( r = -.20, p < .0001 \), demonstrating that parental social support provides a buffer against anger expression. However, Multiple Regression analysis revealed that a significant predictor of trait anger was the outward expression of anger, \( r^2 = .38, p < .001; 38\% \) of the variance of anger expression was comprised of trait anger. Lam (1999) provides an explanation for her findings in light of Spielberger’s (1996) conceptualization of anger.

Spielberger (1996) posited that anger may occur in response to a specific situation (state anger) or be an inherent, temperament trait (trait anger). Anger in response to provocation is defined as state anger: “an emotional state marked by subjective feelings that vary in intensity from mild annoyance or irritation to intense fury and rage” (Spielberger, 1996, p.1).

State anger is generally accompanied by muscular tension and arousal of the autonomic nervous system. Over time, the intensity of state anger varies as a function of perceived injustice, attack or unfair treatment by others, and
frustration resulting from barriers to goal directed behavior. (Spielberger, 1996, p. 1)

On the other hand, Spielberger (1996) suggests that trait anger may be more stable and consistent over time and across situations:

Trait anger is defined as the disposition to perceive a wide range of situations as annoying or frustrating and the tendency to respond to such situations with more frequent elevations in state anger [thus] individuals high in trait anger experience state anger more often and with greater intensity than individuals low in trait anger (p. 1).

Based on Spielberger's (1996) conceptualization of anger, Lam (1999) suggested that the Hong Kong Chinese parents in her sample experienced high levels of trait anger or a propensity towards perceiving a variety of parent-child interactions as anger-provoking. Therefore, in the context of the parent-child relationships, stress and anger were likely to be expressed outwardly and directed at children. However, these findings appear to be counter-intuitive to the traditional Chinese value of controlling emotions (Haar & Krahe, 1999; Tanka-Matumi, 1995). Lam (1999) suggested that a lack of appropriate cultural understanding of anger expression among members of the Chinese culture may exist. While traditional values emphasize restraining negative emotions, Lam (1999) notes that the relational context in which anger is expressed may affect the discharge of emotion. The researcher called for continued research in the area of cultural differences with regard to the expression of anger.

A strength of the above mentioned study was the use of a large sample, which lends support for the generalizability of findings to the larger population of Hong Kong
Chinese parents. Additionally, the examination of one cultural group was an attempt at disentangling the effects of culture and anger expression. However, Lam (1999) utilized translated versions of the PSI/SF, STAXI, and MSSI. It is likely that statistical reliability and validity were lost in the translation; the reliability and validity of the results are thus questionable.

The above studies demonstrate inconsistencies with regard to anger expression among Asian Americans. Where traditional conceptualizations of anger expression among this group value restraint of negative emotions, anger expression may differ depending on the relational context examined. In addition, crime statistics in the past decade suggest that this minority may be demonstrating a shift toward the dominant culture’s outward expression of anger. For example, between 1993 and 1996 the number of Asian American youths arrested for major felonies increased 38% (Center for Disease Control and Prevention/National Center for Health Statistics, 1997). Similarly, Cartledge and Johnson (1997) reported that there appears to be an emerging profile of Asian American youths that includes school failure and increasing criminality. Joe (1993) began to examine the causes of this changing profile in the early part of the 1990’s. They concluded that associations with and involvement in Asian gang activity may explain the increase in criminal behavior within this minority group. Joe (1993) suggested that membership in gangs is appealing to these adolescents since they offer a sense of belonging, support, respect, and a common language.

The information presented in this section provides insight into the change that is occurring among Asian American students with regard to their expression of anger. More research is needed to understand the factors contributing to this change if
meaningful interventions and prevention strategies are to be effective with this minority group. Similarly, investigations examining the cultural influences on anger expression would provide insight into how Asian American's react and respond to anger-provoking situations. The literature to date is sparse and as demonstrated above, provides inconsistent findings. Additional research focused on anger as it relates to school violence and Asian American students is needed to discover the unique socio-emotional needs of this minority group.

Thus far, anger expression related to Asian Americans has been presented. The current study examined a sample comprised of African American and Latino/Hispanic students as well. Therefore, anger expression among these minority groups must be reviewed.

While the Asian American collectivistic culture traditionally dictates that the expression of anger is directed inward, other cultures are likely to engage in more outward expressions of anger. Cartledge & Milburn (1996) proposed that minority groups that function according to a "culture of honor" typically assert their anger and aggressiveness in physical ways. Such groups include African Americans, and Latinos/Hispanics. They speculate that these concepts of 'badness' and 'machismo' represent a guiding behavioral principle among these minority groups. Thus reactions to anger are done in a 'saving face manner' to publicly demonstrate their feelings of discontent (Cartledge & Milburn, 1996; Hammond & Yung, 1993). However, the presence of machismo-related anger expression in adolescents had not been confirmed.

Deffenbacher and Swain (1996) sought to explore aggressive forms of anger expression among adolescents. More specifically, they were interested in the effects of
culture and ethnicity on anger expression. They utilized a sample of 526 male and 662 female White non-Hispanic and 603 male and 780 female Mexican American 7-8th graders; 699 male and 966 female White non-Hispanic and 858 male and 1,193 female Mexican American 9-12th graders also participated. The participants completed self-report measures examining anger expression.

Deffenbacher and Swain (1996) hypothesized that Mexican American adolescents would employ more physical and verbal modes of anger expression than their White non-Hispanic counterparts and that this was in line with cultural mores regarding the emotive discharge of anger. However, their results did not support their hypotheses. Ethnicity effects were limited to verbal expression of anger as Mexican American and White non-Hispanic youths did not differ with regard to the reported use of physically expressive styles (Deffenbacher & Swain, 1996). While a significant univariate analysis, $F(1, 6312) = 99.81, p < .001$, was computed for verbal expression of anger, examination of the means revealed that White non-Hispanic students ($M = 9.76, SD = 3.55$) expressed their anger more frequently via negative verbal means than did Mexican American students ($M = 8.88, SD = 3.60$). These findings were in the opposite direction than predicted. Deffenbacher and Swain (1996) concluded that while “culture-based patterns of anger expression exist” (p. 67), the measures utilized in their research may not have been sensitive to determining the presence of machismo-related forms or other forms of anger among Mexican American adolescents. Additionally, they cautioned that continued research is needed with regard to anger expression in adolescents noting that cultural and ethnic variables are of importance to examine and to fully conceptualize anger expression.
One of the strengths of Deffenbacher and Swain (1996) study was that they utilized a large sample size. They also examined culture and ethnicity as variables related to anger, providing much needed research and results. However, it is possible that because their sample was so large that their findings were due to a Type II error. Additionally, Deffenbacher and Swain (1996) fail to further examine the cultural and ethnic mores and values of the Mexican American participants that could have had effects on their outcomes.

Traditional social theories maintain that strong cohesive families, communities and religious groups tend to exert control over the people’s engagement in criminal activities and pathology (Cohen, 1998). However, violence is often viewed as an outward expression of anger and is not always considered to be pathological or atypical. In cultures where there is more social organization, it is likely that outward expressions of anger most notably in the form of violence and aggression are considered more culturally appropriate (Cohen, 1998; Escobar-Chaves, Tortolero, Markham, Kelder, & Kapadia, 2002). African American and Latino cultures are traditionally conceptualized as family and group-oriented. Thus, it would follow that expressions of anger in the form of aggression and violence would be more culturally acceptable. As noted above, the stereotypical outward expression of anger among Mexican/Latino/Hispanic American adolescents have not been adequately studied and consistently documented in the literature. However, the outward expression of anger among the African American population has been somewhat more consistently documented in the literature (Armstead & Clark, 2002; Moisan, Sanders-Phillips, & Moisan, 1997).
A study by Moisan, Sanders-Phillips, and Moisan (1997) sought to examine the ethnic differences in the circumstances of sexual abuse, depression and anger among sexually abused Black and Latino boys. A sample of 60 Black and Latino adolescent males between the ages of 13 and 18 years of age was drawn from residential programs, juvenile camp facilities and an outpatient treatment program in Southern California. Participants completed the Children's Depression Inventory (CDI) and the State-Trait Anger Expression Inventory (STAXI).

The results of the State-Trait Anger Expression Inventory were used to provide information about the differences between groups with regard to anger expression. Moisan et al. (1997) found that as measured by Trait Anger Scores, ethnicity was correlated with anger scores, $r = .25, p \leq .05$. Blacks were more likely to have higher anger scores as compared to Latinos. Additional regression analyses revealed that ethnicity was a significant correlate of anger scores, $\beta = .30, t = 2.3, p \leq .05$, indicating that being Black was related to high scores for anger subsequent to sexual abuse.

Moisan et al. (1997) hypothesized that Latino males would be more likely to be abused by an extended family member, exposed to anal sex, and have higher depression scores and lower anger scores than Black males. Additionally, Moisan et al. (1997) hypothesized that regardless of the circumstances of the sexual abuse, the relationship of anger and depression would be independent of ethnicity. Their findings, as discussed above, supported their hypotheses. Results were presented in terms of the differential responses between the ethnic groups with regard to stressful situations, with sexual abuse representing the stressful situation examined.
Moisan et al., (1997) indicated that anger is the more common response to stress among African American children and adolescents while Latino adults and children are more likely to respond to stress by reporting symptoms of depression. However, the exact mechanisms of the expression anger and depression among Black and Latino children is not clear. Moisan et al. (1997) suggest that the differences may be a function of ethnic differences in family functioning and structure. “Reported differences between Black and Latino families in attitudes, perceptions, and reactions to sexual abuse, as well as differences in structure, definitions of family roles and behaviors, and expectations of children, responses to stress and crises, and the stressors of acculturation, may influence a child’s response to sexual abuse” (Moisan et al., 1997, p. 475). Additionally, they reported that African American children may also be more likely to be exposed to multiple forms of victimization (witnessing community violence, poverty, and racism) than their Latino counterparts and this has been previously found to be associated with higher levels of anger and aggression (Shakoor & Chalmers, 1991).

The Moisan et al. (1997) study provides some support for the presence of more outward expressions of anger among African American adolescents and acknowledges that ethnic and cultural factors contribute to an adolescent’s response to trauma and the expression of anger. However, the small sample size compromises the external validity, making the generalizability of findings questionable.

While some research (Moisan et al., 1997) has demonstrated that anger expression among African Americans is likely to be directed outward, a recent study has called into question the usefulness of the construct of anger expression with African American adolescents. Armstead and Clark (2002) reported that the manner in which anger is
expressed in adolescents is currently under-examined and researchers fail to thoroughly investigate cultural and ethnic differences with regard to anger expression. Furthermore, they noted that most studies interested in assessing the psychometric properties of anger expression inventories fail to include adequate numbers of African American youth in the samples. Thus, they examined the psychometric properties of two widely used measures of anger expression, the *State-Trait Anger Expression Inventory* (STAXI) and the *Framingham Anger Scales* (FAS). Specifically, Armstead and Clark (2002) were interested in discovering whether or not “anger expression is a useful construct or set of constructs to use with African American youth” (p. 365).

The participants in the study were 86 students from 6th-8th grade classes in an inner-city junior high school, 49 girls and 37 boys. All participants were African American and ranged in age from 11 to 15 years (M = 13.02). Participants complete the STAXI which is comprised of three-factor analytically derived anger subscales: anger-in, anger-out, and anger-control. The students also completed the FAS, another three-factor analytically derived scale of anger. It consists of three subtests: anger-in, anger-out, and anger-discuss.

Armstead and Clark’s (2002) found a small to moderate positive relationship between the anger-in and anger-out subscales of the STAXI, \( r = .037, p < .001 \). They also found that the anger-in and anger-out subscales of the FAS were not statistically related, \( r = .03, p = ns \). Additionally, Armstead and Clark (2002) results did not support the presence of a three-factor anger model typically discernable by the STAXI. They concluded that the component structures of anger, anger-in, anger-out and anger-control, were not distinct dimensions of anger expression for the sample of African American
they studied. However, the results also indicate that the subscales of the FAS are separable and thus provide a more reliable assessment of two dimensions of anger expression, anger-in and anger-out, in African American adolescents.

Armstead and Clark (2002) note that their results must be interpreted with caution since they employed a cross-sectional design and utilized a relatively small sample of students. However, their research is important as it highlights the need for additional studies that explore “anger expression in adolescents as a function of ethnicity, as well as gender, socioeconomic status, urbanity, acculturation, and age” (p. 370).

Fully understanding anger is complicated by the cultural context in which it is viewed. In all cultures there are appropriate and accepted ways in which to handle anger (Modrcin-McCarthy, Pullen, Barnes & Alper, 1998). This section presented literature indicating that differences in anger expression may exist across Asian American, African American and Latino/Hispanic cultures. While the results are somewhat inconsistent, it appears as though individuals of Asian descent are likely to engage in anger suppression, while members of African American and Latino/American cultures are likely to express anger in an outward fashion. Continued research is needed regarding the implications of anger expression and the relationship to school violence.

**Anger Reduction**

It has been demonstrated that methods for reducing aggression include: identifying anger warning signs, recognizing thoughts that feed anger, utilizing anger management skills, applying a problem-solving approach to social conflicts, and practicing behavioral skills to manage conflictual social situations (Novaco, 1975; Van Schoiack-Edstrom et al., 2002). Similarly, tactics designed to ameliorate the
physiological and cognitive/behavioral responses to anger are also useful in decreasing an individual's response to anger (Novaco, 1975) and that these strategies are useful across gender and ethnic groups. As stated previously, Project Peace includes the teaching of anger reduction techniques as a means of providing students with non-violent approaches to conflict. The theories and research presented in this section supports the incorporation of anger reduction techniques in the Project Peace curriculum.

Attitudes Toward Violence

This section serves to discuss adolescents' attitudes towards violence. de Anda (1999) suggested that an individual's beliefs regarding the acceptance of violent or aggressive behavior in response to potentially threatening situations are the reflection of both social and interpersonal factors. This highlights the importance that an examination of individuals' attitudes towards violence requires a multifaceted approach seeking to understand the interplay between the psycho-social attributes that mediate violence-related attitudes.

Violence is pervasive in society (Funk, Elliott, Urman, Flores & Mock, 1999). Not only do many young people live with violence in interpersonal relationships, but all young people live with an abundance of media images of violence—of situations where people abuse power and control. Perhaps a way to conceptualize an individual's attitude toward violence can be understood in terms of meeting basic psychological needs. Glasser (1984) has identified four basic psychological needs that motivate behavior:

1) Belonging: Fulfilled by loving, sharing, and cooperating with others.
2) Power: Fulfilled by achieving, accomplishing, and being recognized and respected.
3) Freedom: Fulfilled by making choices.

4) Fun: Fulfilled by laughing and playing. (p. 7)

The research presented in this section suggests that examining the psycho-social factors that contribute to adolescents' attitudes toward violence is important as a means of discovering effective intervention and prevention strategies.

Past research has amply documented an association between exposure to violence, particularly victimization experiences, and violent behavior (Richters & Martinez, 1993; Singer, Anglin, Song, & Lunghofer, 1995). Richters and Martinez (1993) found that respondents who owned or carried guns were more likely to have been shot themselves. Singer, Anglin, Song and Lunghofer, 1994 reported that past violence exposure accounted for substantial variability in self-reported violent/predatory behavior, when demographic variables were statistically controlled. Similarly, DuRant, Cadenhead, Pendergrast, Slavens, and Linder (1994) found that past exposure to violence explained 27% of the variance in self-reported violent behavior in a sample of low-income, urban, black adolescents.

Similar results were obtained by Bishop, Woodward, and D’Angelo (1992) and, Gladstein and Slater (1988). Comparisons among violent delinquents, nonviolent delinquents, and control subjects indicate that violence exposure is more distinctively associated with violent crime than with juvenile crime in general (Gray, 1988; Widom, 1989). More broadly, a history of physical abuse or violent parental discipline is an important risk factor for violence (Powers & Eckenrode, 1988; Rivera & Widom, 1990). This link between exposure and future behavior implies the existence of a self-perpetuating pattern that has been termed "the cycle of violence" (Widom, 1989).
Research has demonstrated a positive relationship between witnessing violence and future aggressive behaviors (Shakoor & Chalmers, 1991; Singer, Anglin, Song, & Lunghofer, 1994). Children who witness violence between their parents and peers are likely to show elevated rates of physical aggression in their interactions with both peers and adults (Suh & Abel, 1990). It appears as though observational and direct exposure to violence is related to the execution of violent behavior in response to conflictual situations. The impact of observational exposure highlights the role of modeling in the development of violent behavior.

Shakoor and Chalmers (1991) sought to determine the effects of adolescents’ exposure to violence. They examined the effects of co-victimization by African American adolescents on their behavioral development. The researchers defined co-victimization as the “witnessing of others being victimized including sexual abuse and murder” (p. 235). A total of 1,035 African American adolescents ranging in age from 10 to 19 participated in the study; the mean age of the participants was 16 years. The sample was drawn from 5 high schools and 2 elementary schools in Chicago, Illinois.

Participants completed the Victimization Screening Form and the Violence Screening form as part of the study. The former assesses the type of violence the participant has observed during the course of his or her lifetime, while the latter assesses the frequency and type of violent acts completed by the participants. The results of the study reveal that 75% of boys and 70% of girls had witnessed someone being shot, stabbed, robbed, or killed. Of the 400 adolescents who had seen the shooting of another person, 45% were girls and 55% were boys. Of the 557 participants who had witnessed
robberies, 53% were boys and 47% were girls. Stabbings were witnessed by fewer participants (n = 348), 57% boys and 43% girls.

Shakoor and Chalmers (1991) utilized the Chicago police department’s 1986 statistics to provide support for their findings. According to police data, of the 82 aggravated assaults, 57% were committed by African American adolescents under the age of 20; of the 762 murders, 28% were committed by the same age group; and African American adolescents accounted for 71% of the murders committed against other adolescents of the same population.

In comparing the Chicago police department’s data to their findings, Shakoor and Chalmers (1991) concluded that co-victimization among African American adolescents most likely contributed to their own violent acts. They suggested that adolescents who were frustrated by the witnessing of a large number of crimes, had a tendency towards acting out their frustration by committing a violent act. Evidence supporting Shakoor and Chalmers’ (1991) outcomes was found in reports from personnel of the schools that were surveyed. School personnel indicated that the most common behavioral problems found at the schools were the numerous fights that took place.

Shakoor and Chalmers (1991) study provides useful statistics and data regarding the types and frequency of violent acts committed by African American adolescents residing in Chicago, Illinois. The researchers utilized a large sample size improving the study’s external reliability. However, there are several limitations to this study. Shakoor and Chalmer’s (1991) fail to examine other possible confounds that could have contributed to the participants expression of violence. Additionally, since results are reported in terms of percentages, causality about the adolescents’ behaviors cannot be
made. While it is of interest that Shakoor and Chalmers (1991) provided gender data, they did not provide hypotheses about the differences they uncovered.

In a more recent report summarizing the causes of youth violence, Elliot (1994) suggested that for many, youth violence appears to be either the only way or the most effective way for youth to achieve status, respect, and other basic social and personal needs. This suggests that peer relationships and interactions may be implicated in adolescents' attitudes toward violence.

As discussed previously, one of the key components of adolescence is the development of a sense of individual identity. When an individual struggles with his or her sense of identity, research has demonstrated that involvement with negative peer groups, delinquent activities, and violence are likely to occur as means of developing a sense of self (Allen et al., 1994; Guerra & Slaby, 1990). Negative peer groups are most often conceptualized in the form of gangs. Although negative peer groups must not be as organized as a formal gang, these groups often adhere to similar belief structures and organizational formations (Allen et al., 1994). Such groups typically view violence as a means of self-assertion and foster the belief that physical violence is justified. It seems plausible that exposure to violence would be causally linked to future violent behavior through mediation of attitudes. It is likely that attitudes toward violence may develop from exposure to violence and then contribute to future violence-related behaviors such as gun/weapon ownership and gang membership.

Research has indicated that gender and ethnicity contribute to an individual's attitudes towards violence. A recent study examined these demographic variables as they relate to violence. Funk, Elliott, Urman, Flores, and Mock (1999) examined Reactive
violence (violence used in response to actual or perceived threat) and Culture of Violence (a pervasive, ingrained identification with violence as an acceptable and valued activity). The participants in the study were 638 adolescents (317 females, 321 males) in grades 8 through 12. The adolescents were primarily European American (n = 321), and African American (n = 200). Hispanic Americans comprised 5% of the sample. Participants completed the Attitude Towards Violence Scale yielding a total Provioience Score. Funk et al., (1999) reported that an unrotated one-factor solution revealed a strong general factor which they labeled as Total Provioience Attitudes (Cronbach’s alpha = .86). The Provioience Score includes non-violent approaches or responses to conflict including verbal mediation and ‘walking away.’ Factor analysis confirmed the presence of two distinct factors loadings on the Total Provioience Score: Factor 1-Culture of Violence (M = 2.29, SD = .59, Cronbach’s alpha = .75), and Factor 2-Reactive Violence (M = 3.15, SD = .77, Cronbach’s alpha = .80).

As mentioned above, culture of violence refers to a group’s endorsement of violence as a means of conflict resolution. While reactive violence refers to outward, physical responses to anger including verbal altercations and physical fights. The researchers also examined a provioience score as a means of securing information about the participant’s use of non-violent approaches to conflict. These constructs are similar to those examined in the Attitudes Toward Violence Measure of Project Peace. This scale seeks to discover students’ beliefs about appropriate means of dealing with conflict and their rationalization for the use of violence. The former is similar to Funk and colleagues (1999) Provioience Score and the later is analogous to the Reactive Violence Score. This makes comparisons between outcome variables possible.
The results of Funk and colleagues (1999) indicate that males are more likely than females to endorse proviolence attitudes. This difference was significant for the general factor \( r = -0.26, p < .01 \), as well as for the Reactive \( r = -0.20, p < .01 \) and Culture of Violence \( r = -0.22, p < .01 \) factors. Ethnicity was also found to be related to the endorsement of proviolence attitudes. African Americans endorsed Reactive Violence statements at higher levels \( r = 0.16, p < .01 \), while European American endorsed Reactive Violence and Total Provioience statements at lower levels \( r = -0.19, p < .01 \) and \( r = -0.15, p < .01 \), respectively. Although Hispanic Americans comprised a small portion of the sample, they were found to endorse Culture of Violence items at a slightly higher level \( r = 0.10, p < \text{ns} \) than African or European American participants. The researchers conclude that being male, being of a non-European American ethnicity, or being a victim of violence predicted endorsement of proviolence attitudes.

The primary limitation of this study is its sole reliance on the use of self-report measures. Additionally, Funk and colleagues reported that the data were collected by a number of different teachers. Thus systematic controlled processes were not employed compromising the validity of the data.

Thus far, the information presented in this section has not reviewed the literature with regard to gender differences and attitudes toward violence. Taken collectively, the studies presented here indicate that gender differences are likely to exist with regard to attitudes toward violence. Similarly, the majority of the research reviewed here examined samples of male adolescents. This is likely due to the fact that research indicates that boys are more likely to endorse violent means of confrontation (Funk et al. 1999). With regard to school violence, boys have been found to be more likely to be
involved in violent acts. Flannery (1993) reported that while nearly 18% of boys are likely to carry a weapon to school, only 5% of girls are likely to do the same. However, recent research has demonstrated that girls are becoming more likely to engage in violent acts (Ellickson & McGuigan, 2000). Continued research with regard to gender differences and attitudes towards violence are clearly indicated, especially when school violence is considered. A review of the literature by the present researcher reveals a gap in information regarding girls and school violence. The majority of studies examine boys and violence suggesting that continued attention is needed to examine potential gender differences with regard to school violence.

Taken together, the information presented here indicates that a past exposure to violence may lead to future expression of aggression in violent ways (DuRant et al., 1994; Singer et al., 1995). In addition, ethnicity was found to be a variable related to attitudes toward violence (Funk et al., 1999; Shakoor & Chalmers, 1991). The few existing studies examining ethnicity and attitudes toward violence presented here suggest that African Americans and Latino/Hispanic Americans are more likely to endorse violence, while Asian Americans and Caucasians are more likely to employ non-violent methods of conflict resolution (Funk et al., 1999; Shakoor & Chalmers, 1991). Continued research is needed examining the gender differences and the endorsement of violence. The present study seeks to provide additional data to the existing body of literature with regard to attitudes toward violence as a function of both gender and ethnicity.
Skills and Knowledge: An Assimilation of Project Peace Material

It has been clearly stated throughout this work that one of the aims of the present study is to provide empirical validation for the use of Project Peace as a violence-prevention/conflict-resolution tool for use with adolescents. Thus, the importance of evaluating the student's assimilation of Project Peace materials becomes apparent. As a part of curriculum development, de Anda (1997) developed the Skills and Knowledge Measure designed to assess "the student's assimilation of curriculum content" (p. 8). This serves as an objective measure of the student's acquisition of Project Peace materials. Providing this information and statistical validation will assist in future violence prevention and conflict-resolution curricula development.

"While curriculum involves all students, the skills learned require practice and refinement before they can be consistently effective in resolving conflicts and responding to violence" (Bosworth, Espelage, & DuBay, 1998, p. 785). As mentioned in the Limitations section previously, a lack of follow-up studies makes it difficult to discuss the long-term changes in behavioral practices among curriculum participants. What can be offered through the outcomes of the Skills and Knowledge Measure is statistical support for the short-term outcomes of Project Peace. The present study seeks to provide information about the short-term efficacy of this violence prevention tool.

The Skills and Knowledge Measure seeks to assess the student's assimilation of curriculum content. Little research exists examining the differential effects of violence prevention programs across gender and ethnicity. Research is conflicting regarding whether or not current violence prevention programs currently in place have differential effects on males and females. Previous evaluations of school-based preventative
interventions suggest that they may be effective for boys, not girls (Farrell & Meyer, 1997; Leff et al, 2001), while other studies suggest that there is no difference in intervention across gender groups (Aber et al., 1998; Loeber & Stouthamer-Loeber, 1998). However, recent research examining violence and gender indicates that outward aggression is more likely among school-aged boys, demonstrating a need for interventions that target aggressive and violent behaviors in a preventative way (Ellickson & McGuigan, 2000; Lindeman, Harakka & Keltiangas-Jarvinen, 1997).

Similarly, as described previously, the gender differences in the curvilinear development of aggression as found by Lindeman and colleagues (1997) suggest that violence prevention interventions need to be developed to address the differing developmental needs of males and females. Research has indicated that violence prevention programs may serve as a ‘buffer’ against the developmental trajectories of aggression (Farrell & Meyer, 1997), thus making males more likely to extract knowledge and skills from violence prevention and intervention programs (Leff et al., 2001).

An examination by this researcher revealed that scant research exists examining the differential effects of violence prevention programs across ethnic groups. Research indicates that empowering youths within their own environments significantly increases school attachment and student commitment (Kenny & Watson, 1999), resulting in a decreased likelihood to engage in risky behaviors including violence and drug and alcohol use (McNeely et al., 2002). However, the lack of cultural sensitivity in American schools often impedes the development of school connectedness for minority youth (Goldstein & Conoley, 1997). This makes developing intervention programs that
successfully target majority and minority populations a difficult, yet important task, especially when the issue of school violence is considered.

Preliminary research has demonstrated that violence prevention programs are likely to demonstrate the greatest impact on minority populations as it offers members of these groups a means of understanding the social norms and values of the majority populations (Domitrovich & Greenberg, 2000; Farrell & Meyer, 1997; Leff et al., 2001). As stated previously, school violence prevention programs may act as a ‘buffer’ for boys in the development of aggression or violence. The same mechanism may be at work with minority populations providing them with skills to manage conflicts that are outside their typical behavioral repertoire (Leff et al., 2001). Clearly, more research on school violence examining the different prevention tools that are effective for a variety of cultural groups is warranted.

Conflict Resolution

Preventing violence and resolving conflicts are interrelated. Research has demonstrated that violent behaviors including physical assaults, homicide, and robbery are often the result of spontaneous arguments among acquaintances or friends (Casella, 2000; Guevremont & Foster, 1993). The present study is interested in examining conflict resolution skills as a function of an alternative behavioral response to potentially conflictual social interactions. Thus, the importance of teaching students constructive ways of managing conflicts becomes integral in the implementation of violence prevention programs. This section serves to examine the development of conflict resolution skills and training programs that highlight and address the promotion of prosocial behavioral responses.
Conflict in and of itself is not positive or negative. Rather, it is the "response to conflict that transforms it into either a competitive, destructive experience or a constructive challenge offering the opportunity for growth" (Crawford & Bodine, 1996, p. 7). Modern conflict resolution programs stress peer mediation, a technique found in many cultures. In ancient China, people practiced the Confucian way of resolving disputes by using moral persuasion and agreement. In Japan, the village leader was expected to use mediation and conciliation to assist community members to settle their disputes. In parts of Africa, a neighborhood meeting, "moot," gathered, and a revered member helped disputants resolve their conflicts without involving a judge or an arbitrator or the use of sanctions. For centuries, local religious leaders, such as priests, ministers, and rabbis, were community mediators.

Even though community mediation has been a part of societal living for thousands of years, school-based programs are relatively young, spanning three decades (Johnson & Johnson, 1995). Numerous school curricula have been developed to promote the acceptance of norms against violent behavior and to assist students develop social, problem-solving, conflict resolution, and anger management skills to avoid violence. Curricula aimed at teaching children prosocial skills are based on the belief that violent behavior is learned through modeling and reinforcement, and that these same processes can be used to teach children nonviolence (Walker, 1994).

Providing adolescents with conflict resolution skills has been found to affect their ability to manage interpersonal conflicts (Hay, Byrne, & Butler, 2000). In an investigation of aggression, prosociality and withdrawal as reactions to interpersonal conflict situations in three different age groups of adolescents, Lindeman and colleagues
sought to discover if there were any differences that emerged as a function of sex and age in the order of strategies used to cope with conflict-laden events.

These researchers divided adolescents into three groups: preadolescents (11-13 years of age), midadolescents (14-16 years of age), and late adolescents (17-19 years of age). The study examined 2594 adolescents utilizing a questionnaire that included a description of two day-to-day problem situations the students were likely to encounter in their school environment. They found that aggression developed in a curvilinear manner: 14-year-olds used aggression more than 11-year-olds, $F(2, 2591) = 26.82, p < .001$, and more than 17-year-olds, $F(2, 2591) = 56.58, p < .001$. The results were consistent for females and males alike. The 14-year-old girls used aggression more than 11-year-old girls, $F(1, 826) = 15.5, p < .001$, and more than 17-year-old girls, $F(1, 899) = 56.33, p < .001$. Similarly 14-year-old boys used aggression more than 11-year-old boys, $F(1,840 = 40.3, p < .001$, and more than 17-year-old boys, $F(1, 865) = 25.2, p < .001$. However, boys differed from girls in that at age 17, boys' aggression was at the same level as at age 11, $F(1, 863) = 1.95, p = \text{ns}$, whereas girls' aggression was lower at age 17 than at age 11, $F(1, 899) = 56.43, p < .001$. The results also demonstrated that boys used more aggression than girls at age 11, $F(1, 843) = 48.3, p < .001$, at age 14, $F(1, 826) = 79.4, p < .001$, and at age 17, $F(1, 919) = 228.0, p < .001$.

Lindeman and colleagues (1997) suggest two reasons for this curvilinear development: 1) endocrinological changes in puberty may explain the dominance of aggression in mid-adolescence; and 2) since cognitive processes do not develop curvilinearly in adolescence, it is unlikely that a developmental delay in cognitive abilities produces the temporary increase of aggressive reaction. Rather, the age-related
changes in the context (changes in peer relations, group norms, and developmental tasks—developing one’s identity and acquiring gender roles) where adolescents are called to apply the existing problem-solving skills they possess may have accounted for the results. Thus, the dominance of aggressive reactions during midadolescence may be understood in terms of the possibility that adequate prosocial strategies may not be available during midadolescence. This highlights the importance of providing students in this developmental stage the skills to develop prosocial, anti-aggressive responses to environmental situations that match their cognitive abilities. The sample size used in this study was large (n = 2940). However, utilizing such a large sample may have inflated the actual differences. The results may have been due to the detection of a relatively small effect size rather than to actual differences.

In summary, there is evidence that schools can promote the development of skills to avoid violent behavior through the use of nonviolent conflict management skills. Research (Lindeman et al., 1997; Shure & Spivack, 1980, 1982, 1988; Weissberg & Greenberg, 1997) has indicated the following features of conflict resolution that must be considered in evaluations of curricula designed to address violence and promote prosocial interpersonal interactions:

1. The problem-solving processes of conflict resolution (negotiation, mediation, and group decision-making) can improve the school climate.

2. Conflict resolution strategies can reduce violence, vandalism, chronic school absence, and suspension.
3. Conflict resolution training can assist students and teachers in understanding and respecting the differences between themselves and others.

4. Shifting the responsibility for solving nonviolent conflicts to students, frees adults to concentrate more on teaching and less on discipline.

5. Conflict resolution training increases skills in listening, critical thinking, and problem-solving—skills necessary for learning.

6. Conflict resolution education emphasizes seeing other points of view and resolving differences nonviolently.

As discussed throughout the body of the present research, one of the goals of Project Peace was to assist adolescents in reducing aggressive and violent behavior via expanding their positive coping repertoire. Offering nonviolent conflict-resolution strategies demonstrates an attempt to achieve this goal. de Anda (1997) aptly expressed the inextricable relationship between programs that address violence prevention and conflict resolution when she stated:

Prevention programs work directly to reduce the potential for violent confrontation among youth in the schools by teaching methods to (1) control the emotions that lead to escalation of conflict, (2) develop alternative nonviolent strategies for managing everyday problems and high-risk situations, and (3) change youths’ attitudes about the acceptability of violence as a mode of interacting with peers. (p. 1)

Project Peace represents a violence prevention program that incorporates the teaching of conflict resolution skills.
The literature to date has revealed mixed results with regard to outcome studies examining the effectiveness of conflict-resolution programs as a means of addressing violence in the schools. There is some evidence (Aber et al., 1996; Rixon & Erwin, 1999; Skiba & Peterson, 1999) that conflict-resolution skills and violence prevention skills are related subjects. The exact relationship has yet to be determined. Further research is needed to uncover the relationship between violence prevention and conflict-resolution in an effort to develop comprehensive programs aimed at violence in the schools. More specifically, research examining the effectiveness of conflict-resolution training across gender and ethnic groups is needed to appropriately provide intervention strategies to these groups.

**Ethnic and Socio-Cultural Issues**

Recent research has suggested that the current literature examining school violence fails to comprehensively address ethnic and cultural issues related to violence prevention (Leff et al., 2001; Mcloyd & Sternberg, 1998). Similarly, gender and socio-cultural factors related to school violence and its prevention are under-examined in the current body of literature. As such, one of the aims of the present study was to examine these variables. This section serves to provide information about issues related to culture and ethnicity that are important to address when dealing with multicultural groups.

Violence in the school is not restricted to racial or cultural minorities. For these groups, cultural and racial factors need to be addressed in order for effective interventions to be designed. One issue is ethnic identity and its relationship to the development of psychosocial and adaptive behaviors (Haar & Krahe, 1999). Ethnic identity can provide a sense of belonging and may be particularly important for disenfranchised minority
groups (Phinney, 1990; Smith, 1991). Adaptive behavior is considered to be partially based on the way an individual views his or her own ethnic group and that of others. Phinney (1990) proposes a three-stage evolutionary process that contributes to one’s ethnic identity formation. In the first stage, “unexamined identity,” an individual has not yet been exposed to ethnic identity issues and demonstrates a preference for the dominant culture. The second stage, “exploration,” occurs when the individual begins to be exposed to and learn more about his or her culture of origin. Stage three, “ethnic identity,” is achieved when the individual acquires an intense appreciation of his or her own culture typically manifested in a positive attitude toward the culture and participation in cultural activities. This last stage is associated with a positive attitude toward the dominant culture or group, as well, and allows for healthy psychological adjustment (Phinney, 1990). A similar model is proposed by Soriano and Soriano (1994), who suggests a four-part process: 1) the “ideal self” (what an individual would like to be); 2) the “feared self” (what an individual would not like to be); 3) the “claimed self” (what an individual would like others to think he or she is), and 4) the “real self” (what the individual believes he or she is).

Ethnic identity development is also often conceptualized in terms of acculturation and assimilation. Acculturation can be defined as “the process of adjustment and accommodation of one’s values, beliefs, attitudes, and behaviors as a result of exposure to other sociocultural contexts and interactions [while] assimilation implies the integration or ‘melting into’ the mainstream culture” (Soriano & Soriano, 1994, p. 203). As individuals of ethnic minorities progress through the proposed stages of ethnic identity, their levels of acculturation of mainstream culture are likely to evolve and
change over time. Therefore research that examines culturally diverse populations must be cognizant of an individual’s ethnic identity and level of acculturation as these factors are likely to impact their worldview and way of interacting with the dominant culture.

While the majority of the research on ethnic identity has been conducted with college populations or adults, there appears to be some evidence of a relationship between adaptive behaviors and ethnic identities among school-aged children. For example, Soriano and Soriano (1994) proposed that adolescents struggling with identity issues may move toward their desired selves (“macho selves”) to cover up their insecurity for their real selves. Bernal, Saenz, & Kinght (1991) proposed that the adolescents who are most alienated from the dominant cultural group engage in “cultural inversion” in which they judge behaviors characteristic of the dominant group to be inappropriate and unacceptable for members of their own cultural group. For example, past research has demonstrated that the most alienated Hispanic and African American youth will ridicule and label (“acting white”) the socially compliant behaviors of the dominant group when they are executed by their culturally similar peers (Feng & Cartledge, 1996).

Additionally, these youth have been found to label themselves as “bad,” and indicate that the “badder they were, the greater their social status” (Feng & Cartledge, 1996, p. 230).

The data on violent death rates among youth in the United States echoes the emphasis of ‘being tough’ and ‘being bad.’ During the period from 1985 to 1990, there was a 13 % increase, from 62.8 to 70.9 per 100,000, in the violent death rates for adolescents between 15 and 24, in the state of New Mexico. The homicide rate per 100,000 for males between the ages of 15 and 24 was 56.7 for African Americans, 53.6 for Native Americans, 34.1 for Hispanic Americans, and 7.9 for Anglo-Americans (U.S.
Department of Health and Human Services, 2001). The high concentration of minorities involved in violent crimes suggests that members of minority groups may adhere to their sub-cultural dictates valuing outward expressions “machismo” or “badness” as a means of acquiring social status.

Despite the fact that the data reveals high rates and discrepancies between minority and majority populations, little effort has been made to study the social behaviors of children and youths in each group. What follows is a review of the cultural issues to consider when studying African American, Hispanic/Latino American and Asian American minority groups.

* African Americans *

African Americans continue to constitute one of largest minority groups in the United States consisting of 18% of the population between the ages of 14-24 (United States Bureau of the Census, 2000). However, there are few existing studies examining the effects of violence prevention programs or that address the specific cultural needs of African American youth. As discussed previously, Hammond and Yung (1991) provided landmark research moving toward more ethnic and cultural sensitivity in designing and implementing violence prevention programs to this population. Since that time, a review of the literature has failed to provide additional empirical studies introducing new programs or examining the efficacy of current prevention strategies with African American adolescents. The existing studies (Hammond & Yung, 1991; Hammond & Yung, 1993; Loeber & Stouthamer-Loeber, 1998; Palmer, 1987) that focus on negative concepts (violence and aggression) fail to seek out the normative developmental issues (problem-solving skills, and coping skills) present among this minority group.
Additionally, much of the past research has incorporated stereotypical viewpoints (Feng & Cartledge, 1996; Loeber & Stouthamer-Loeber, 1998; Palmer, 1987).

A review of the literature reveals that a few studies have been conducted to assess the social skills development of African American youth (Cartledge & Johnson, 1997; Cartledge & Millburn, 1996; Feng & Cartledge, 1996). The majority of these studies utilize teacher ratings of students’ behaviors. The teachers consistently give African American students more negative behavioral ratings reporting a tendency for members of this ethnic minority to be argumentative and confrontational in their interactions with others than their other-race peers (Feng & Cartledge, 1996; Loeber & Stouthamer-Loeber, 1998; Palmer, 1987). It is likely that these stereotypes arise from cultural styles that are not understood or considered when making evaluations of behavior. For example, when faced with conflict, African Americans tend to employ a verbally direct, assertive approach (Sue & Sue, 1999). This type of confrontational style in which many African American youngsters are socialized is likely to be misunderstood and misinterpreted in the classroom settings (Cartledge & Johnson, 1997).

Similarly, African American students are typically categorized as aggressive, disrespectful, and confrontational (Ramirez, 1989). However, Hundley & Graham (1993) note that seemingly aggressive behaviors should be conceptualized in a developmental and contextual framework. Children and adolescents reared in urban, violence-prone areas, are taught to ‘counter-aggress’ in the face of confrontations, ostensibly as a means of survival. Research has demonstrated that African Americans living in impoverished, urban areas are at risk for engaging in risky behaviors (most notably violent acts including verbal altercation and fights), developing socio-emotional problems and having
academic difficulties (McLoyd, 1998). Thus their seemingly ‘violent’ reactions to
confrontations should be not be conceptualized simply as an ethnicity issue but rather as a
complex interaction of ethnic and demographic variables. Likewise acknowledging the
concepts of ethnic identity and level of acculturation is important in understanding how
African Americans deal with and approach conflictual situations.

Educator and peer evaluations of students’ behaviors or educational curricula
often do not consider these cultural and socio-economic variables. Incorporating cultural
sensitivity where it is needed will provide for equality in education. Similarly, continued
research and evaluation is needed in the area of violence prevention to provide African
American youth with strategies to combat against violence in the schools and to provide
them with conflict resolution skills to manage interpersonal conflicts in socially
acceptable ways.

*Latino/Hispanic Americans.*

According to the United States Bureau of the Census, in the year 2000 Hispanic
Americans constituted one of the largest minority populations of Americans ages 14 to
24. They represent 20.3% of this age cohort (U.S. Bureau of the Census, 2000). Recent
findings reported by the United States Bureau of the Census indicate that Hispanics have
now surpassed blacks as the nation’s largest minority group with a population of about 37
million, compared to about 36.2 million blacks. (*Hispanics Now Largest Minority,*
2003). Hispanics’ areas of origin differ, with individuals of Cuban, Mexican, and Puerto
Rican backgrounds making up the largest sectors of this population. Language was the
most common unifying factor (Ramirez, 1989).
There is a dearth of literature examining school-related behaviors of Hispanic American students. Past studies have indicated that Mexican-American elementary school students are frequently described by teachers as cooperative, quiet, and obedient (Feng & Cartledge, 1996; Casas, Furlong, Solberg, & Carranza, 1990), and that Hispanic-American females are frequently cited as passive and docile (Ramirez, 1989). The academic and social difficulties with these students tend to be language based including the ability to be verbally assertive, initiating social interactions, offering opinions, and exploring their feelings (Goldstein & Conoley, 1997; Ramirez, 1989).

National documentation of the social problems faced by this ethnic minority is minimal in comparison to the information which has been collected about other groups. However, anecdotal and regional data suggest that, as a group, Hispanic Americans are at high risk for exposure to a range of violent experiences, with reported victimization rates approaching those reported for African Americans (Funk et al., 1999). While Hispanic American students currently make up a large percentage of adolescents, systematic research examining the use and efficacy of violence prevention programs with this minority group has not yet been undertaken. The unique cultural characteristics of the minority group should be attended to as a means of providing adequate school success, and more specifically, for providing culturally sensitive violence prevention programming.

*Asian Americans.*

Asian Americans currently represent 17.8% of adolescents and young adults, ages 14-24 (U.S. Bureau of the Census, 2000). Between 1980 and 1990, their numbers increased from 3,500,000 to 7,274,000, representing a 107.8% increase (U.S. Bureau of
the Census, 2000). The majority of the Asian Americans in this country originate from East Asia (China, Japan, and Korea), but other members of this group include those from Southeast Asia, India and the South Pacific islands.

Teacher evaluations consistently profile Asian American students as cooperative, self-controlled, and task-oriented (Cartledge & Johnson, 1997; Feng & Cartledge, 1996). Their preference for a collectivist viewpoint and mode of acting in the world likely contributes to these behaviors, however, this is frequently not considered by others. While teachers tend to value these academic oriented behaviors, others question whether these behaviors are emphasized at the expense of the opportunity to develop interpersonal social skills (Feng & Cartledge, 1996).

The cultural features that appear to contribute to more positive teacher and peer acceptance of Asian American students may cause significant socio-emotional problems that go undetected (Goldstein & Conoley, 1997). For example, the stereotypical view of Asian Americans as hard-working and high-achieving may cause educators to view these students as self-sufficient, thus, more likely to overlook problems they may have adjusting to the school environment. Teachers and administrators need to be aware of and attend to the unique cultural considerations when dealing with Asian American students (Cartledge & Johnson, 1997).

Although past research has suggested that Asian Americans are likely to adhere to a collectivistic viewpoint in their interactions with others, recent research has highlighted the importance of considering an individual’s level of acculturation and stage of ethnic identity development (Tse, 1998, 1999). Tse (1999) demonstrated that younger generations of Asian Americans who reside in America have begun to demonstrate
'ethnic identity incorporation' or have begun to internalize the dominant culture's more individualistic worldview. This paradigm shift appears to demonstrate a progression through the stages of ethnic identity and/or higher levels of acculturation; acknowledging one's culture of origin while assimilating and incorporating features of the dominant culture. Thus in conducting research examining Asian American students, it is important to consider the changing attitudes and beliefs among younger generations to avoid conceptualizing their behaviors and worldviews according to stereotypical ideas.

In conclusion, the existing literature often presents the social skills of ethnic minorities in stereotypical and possibly detrimental ways (Cartledge & Millburn, 1996; Feng & Cartledge, 1996). Similarly, acknowledging levels of acculturation and stages of ethnic identity is important to comprehensively address the ethnic and cultural factors that influence students' way of interacting with others and functioning in the school environment (Phinney, 1990; Soriano & Soriano, 1994; Tse, 1998, 1999). To combat against these stereotypes, an understanding of cultural beliefs and values is essential. Most of the available research literature in child development and peer relationships is based on information from White middle class Western children (Feng & Cartledge, 1996).

Additional ethnic and gender considerations.

The information presented thus far has examined school violence in the context of American schools including an examination of issues related to ethnic minorities and comparing males and females. However, recent research has demonstrated the pervasiveness of school violence in other countries and has examined possible factors that contribute to victimization on school grounds including both cultural and gender
issues (Astor, Benbenishty, Marachi, Haj-Yahia, Zeira, Perkins-Hart & Pitner, 2002; Benbenishty, Astor, Zeira & Vinokur, 2002). This section serves to present recent findings related to school violence that examine ethnic, cultural and gender factors that may be important to address in designing and implementing comprehensive violence prevention programs.

Astor and colleagues (2002) examined the effects of the awareness of risky peer group behaviors on the students’ experiences related to school victimization. Utilizing a sample of 1346 Arab and 1478 Jewish students drawn from a Middle East elementary school (grades 4 through 6), the researchers controlled for gender, ethnicity and grade level to uncover the strongest predictors of personal victimization on school grounds. The participants completed the California School Climate Survey to determine the awareness of the factors contributing to violence and victimization on school grounds. The results of the MANOVA with gender, ethnicity, and grade-level as independent variables and eight peer risk items of the California School Climate Survey as dependent variables were reported. Astor et al. (2002) found significant effects for gender, $F(8, 2441) = 8.64, p < .0001$, ethnicity, $F(8, 2441) = 34.36, p < .001$, and grade-level, $F(16, 4884) = 3.37, p < .001$.

The researchers reported that the significant main effects for gender on specific peer risk items demonstrated that males reported more awareness of risky peer behaviors on school grounds involving students drinking alcohol, using drugs, threatening or bullying, and bringing weapons to school. There were no gender differences in the awareness of destruction of school property, fighting, stealing, and being injured in accidents on school grounds. Ethnic differences were found; Arab students reported
Being aware of students destroying things on school grounds and being injured more on school property than Jewish students. There were no ethnic differences for other specific peer risk variables including drinking alcohol, fighting, stealing, using drugs, threatening or bullying and bringing weapons to school. No main effects for grade level were found, $F (2, 2461) = 3.87, p = ns$.

Astor and colleagues concluded that for the Middle East sample of students studied, elementary school students' knowledge of risky peer group behaviors on school grounds is a more powerful predictor of personal victimization on school property than the students' gender, age, or ethnicity. Although the study conducted by Astor et al. (2002) utilized a sample of students that is significantly demographically different than the sample examined in the present study, the results provide important information regarding predictors of school violence. Although it is important to examine gender, age and cultural issues as they relate to school violence, it is likely that students' perceptions and awareness of their peers' behaviors is a stronger predictor of personal victimization on school grounds than other mediating factors. This highlights the importance for school staff and administrators to work towards creating positive school climates to minimize perceived threats of violence among the student population in an effort to prevent school violence.

In a similar study, Benbenishty, Astor, Zeira and Vinokur (2002) examined Israeli (Arab and Jewish) junior high school students' assessment of the severity of school violence and the fear of attending school. Benbenishty and colleagues noted the importance of attending to the negative consequences of school violence on victims and the importance of studying the unique aspects of victimization in the school setting.
Thus, their research efforts focused on two subjective consequences of victimization in school: not attending school due to being victimized and the assessment that the school has a violence problem. Gender and cultural differences were reported as factors affecting students’ perceptions of the school climate. Benbenishty et al. (2002) proposed a model of direct and mediational effects on junior high school students’ school nonattendance secondary to perceived fear and seriousness of school violence including the observation and participation in risky behaviors, for example, fighting and using alcohol and drugs.

A sample of 6,892 students from 102 junior high schools (grades seven to nine) in Israel was used to test the model put forth by Benbenishty and colleagues. A total of 43.9% of the participants were male, 48.4% were female and 7.3% did not indicate their gender; 67.5% were classified as Jewish with the remaining students identifying themselves as Arab. The participants completed translated versions of the California School Climate Survey.

Benbenishty et al. (2002) reported that their “model fit the data very well…the perceived seriousness of school violence was strongly associated with observing risky behaviors in the school” (p. 83). The direct path from school climate to peer victimization differed across the various groups studied. For girls and Arab students, a positive school climate reportedly reduced peer victimization more than among males and Jewish students. Additionally, girls and Arab students reported more problems of school violence and had greater absentee rates secondary to fear of violence than male and Jewish students. Benbenishty and colleagues concluded that this finding suggests that different cultural and gender groups may be processing information in different ways
when they form their cognitive judgments of school violence. Additionally, altering the school climate as the sole focus of school violence intervention may not reduce fear among students.

The fact that the Israeli students in Benbenschity et al.’s (2002) study are exposed to high levels of non-school violence and face daily threats of terrorism may have had an effect on the findings uncovered makes generalizability beyond the Israeli student population impossible. However, this study indicates that an examination of the subjective experience of the school climate may provide additional important information related to school violence and aid in appropriate violence prevention program development that incorporates understanding and addressing the mediating personal factors that affects how students perceive their school environment. This study also provides support for the importance of uncovering gender and ethnic differences related to school violence as these demographic variables appear to impact students’ perceptions of the school environment.

The information presented in this section indicates that few studies examine the effects of violence prevention programs on minority youth. Continued research is needed to provide culturally and gender sensitive and effective intervention programs to youth of diverse populations. A greater sensitivity and understanding of socio-cultural, ethnic and gender issues, coupled with knowledge of the various cultures represented in American society, will speed the development of culturally appropriate strategies for violence prevention.

[The] concern for securing a safe learning environment for children and youth too often precludes the development of effective school violence prevention and
intervention programs that are mindful of social and cultural backgrounds of youth. It is particularly important to design school-based prevention and intervention efforts that not only teach children and youth prosocial values and conflict resolution strategies but, also strategies that do so with a full understanding of the social, economic, and cultural contexts of students, parents, and communities. (Soriano & Soriano, 1994, p. 233)

Summary and Final Rational Statement

From the information presented thus far, there is no agreement in the literature regarding the causes of school violence. Likewise, there is no consensus as to how to ameliorate violence in the schools, although it is agreed that school violence is a public health problem that needs to be addressed. Prevention of further school ground massacres, fights in school hallways, and verbal assaults creating an unsafe and threatening school climate for our nation’s youth seems to be the focus of recent research. Developing programs aimed at both violence prevention and conflict resolution appear to be the most effective means of ameliorating school violence. Conflict resolution and violence prevention curricula seek to improve students’ social, problem-solving, and anger management skills and to promote beliefs favorable to nonviolence (Hawkins, Farrington, & Catalano, 1998).

The information presented in this chapter demonstrates a lack of empirical evidence supporting the usefulness and effectiveness of one anti-violence program or method over another. The majority of research to date has been program evaluation leaving little or no empirical support behind. Additionally, the demographic variables of gender and ethnicity are virtually absent from the literature on school violence. To better
serve the educational and mental health needs of American adolescence, empirically validated violence prevention/conflict-resolution programs that demonstrate the ability to produce change, in this case prevent future school violence, are needed.
CHAPTER III

METHODOLOGY

The purpose of this chapter is to describe the methods and procedures that were used in this investigation. A description of the participants is presented followed by the procedures that were used in the administration of the measures. The instruments, the scoring methods and measures of reliability are then presented. The remainder of the chapter will discuss the methods used to analyze the data. It is important to reiterate that the present study utilized archival data, thus the methods and procedures presented here were completed by administrators and teachers, not the author of this dissertation.

Participants

The participants in this study were 300 ninth grade students from a high school in northeast New Jersey. According to the lead teacher for the Health and Peer Education program at this school, only 151 pre- and posttests were utilized in analysis. Of the 16 classes of ninth graders, 2 did not complete the posttests due to time constraints. The teachers of one other class reported ‘suspicions’ about the reliability and validity of her students responses on both the pre- and posttests, reporting that her students were acting out during either the pretest or posttest portion of Project Peace. It was reported that a total of 32 students’ results were not analyzed due to either missing the pre- or posttest secondary to absence from school. The teachers and administrators preferred to secure the results of the complete data sets only as a means of providing a statistically sound
sample. Therefore, the present sample, provided to this researcher, consists of 151 students. All participants completed pre- and posttests.

Of the 151 students who completed all sections of the Project Peace pretest and posttest measures, 43% were males and 56.3% were females; .7% did not specify his or her gender. The researcher was not informed by the faculty or administrators as to whether or not any classified students were included in the sample studied. The ethnicity of the participants consisted primarily of Caucasians (85.4%, n = 129). Other ethnicities included African Americans (1.3%, n = 2), Latinos or Hispanics (3.3%, n = 5) and Asian Americans or Pacific Islanders (4.6%, n = 7). In addition, 3.3% (n = 5) identified themselves as “other” and 2% (n = 3) did not specify their ethnic origin. The students ranged in age from 14 to 16 during the course of the study, with a mean age of 14.4 years. The sample of ninth grade students who participated in Project Peace was representative of the larger high school where approximately 75% of the student body identify themselves as white/Caucasian, 5% identify themselves as African Americans, 8% identify themselves Asian Americans, 7% identify themselves as Latinos/Hispanics, and the remaining 5% identify themselves as “other”.

While the present study is not a replication study, it is important to examine the demographic characteristics of the original study. de Anda (1997, 1999) utilized these characteristics in her scale development thus demonstrating the interconnectedness of gender and ethnicity on item content. The original study (n = 157) consisted of 52.2% males and 47.8% females in grades 9 through 12. They ranged in age from 14 to 18 years of age with the majority of students between the ages of 14 and 15; 61.8% were 14 years
of age, 24.2% were 15 years of age. A small number of 16- (n = 8), 17- (n = 9), and 18-
(n = 5) year-olds who were enrolled in the ninth grade were also included.

As noted previously, de Anda (1999) developed and utilized Project Peace on a
population of adolescents from urban Los Angeles who were primarily Latino (61.1%) and
African American (35%), with the remaining students identifying themselves as
American Indians and "other" (2.5%). The participants in the original sample differ from
the sample examined in this study, as the present group of adolescents is rather
homogeneous with the majority of students (85%) identifying themselves as
white/Caucasian. This difference in samples may affect the outcomes, validity and
generalizability of the findings in the present study and lend further support for the use
and efficacy of Project Peace as a violence intervention program.

Project Peace is designed for used in middle school and high school
classrooms...Pilot tests have demonstrated that Project Peace is appropriate
across ethnic and gender groups. One exception is the term dissoning
(disrespecting), which is familiar to most urban and suburban adolescents but may
not be recognized by some groups of adolescents. (de Anda, 1997, p. 3)

According to de Anda (de Anda, personal communication, 1 August, 2002), with
the exception of the pilot studies, the results or outcomes of Project Peace have been
evaluative in nature, failing to supply statistical validation of the measures and outcomes.
The schools and groups that have utilized this violence prevention/conflict resolution
program have not performed statistical analyses on the Project Peace data to date. de
Anda reported that she is presently conducting large-scale analyses of the data collected
by the various schools and programs that have used Project Peace in the past 3 years as
part of a grant she has received from the California Board of Education (de Anda, personal communication, 1 August, 2002). The present study seeks to provide statistical support for the use of Project Peace as a program that is useful for addressing violence prevention and teaching conflict resolution skills with adolescents of diverse ethnic backgrounds and from various geographic locations.

Despite the limited number of studies statistically validating the use of Project Peace, research (U. S. Department of Health and Human Services, 2001; Elliot, 1994) has demonstrated that school violence is an issue that is pertinent and applicable to all ethnicities and geographic locations and one that needs to be addressed to avoid another Columbine or Jonesboro. Furthermore, the theoretical framework from which Project Peace was developed (cognitive-behavioral) demonstrates that this can be a useful tool with a variety of adolescent populations. Bandura (1973, 1977, 1986, 1995), Beck (1976, 1984) and Lazarus and Folkman (1984) have demonstrated the usefulness of the cognitive-behavioral approach in changing behavior and cognitions. In addition, approaches to problem-solving that teach individuals to evaluate behavioral consequence to determine the best response and generate an alternative response have been demonstrated to be effective in modifying a variety of behaviors of children, adolescents, and adults (D'Zurilla, 1986; D'Zurilla & Goldfried, 1971; Feindler, Ecton, Kingsley, & Dubey, 1986; Feindler, Marriott, & Iwate, 1984; Guevremont & Foster, 1993).

Procedure

Project Peace was administered during the third quarter of the 2000-2001 academic year. All students who participated had done so as part of their ninth grade health curriculum. Thus, parental consent and student assent was not needed for students
to participate in Project Peace, as it was a mandatory part of the ninth grade curriculum that was aligned to meet New Jersey State Core Content Standards. Permission to use the data was secured from the Director of Student Personnel Services at the high school (Appendix A). Pre-tests were administered at the beginning of the third marking period (January, 2001) and post-tests were administered upon completion of Project Peace (March, 2001). de Anda (1997) reported that:

although the sessions could be conducted on a daily basis, pilot testing has demonstrated that the desired changes in attitude, knowledge, and behavior are more likely to occur if sessions are offered two or three times per week. This gives students sufficient time to assimilate the material and to be proactive using the skills in their environment. (p. 3)

Thus, Project Peace was administered at the high school over the course of an 8-week quarter that incorporated all 10 sessions plus the review and culmination session (a total of 11 sessions).

All ninth grade health classes from the high school participated in Project Peace as withholding treatment from any one group would present both legal and ethical concerns. Administrators and teachers purchased the Project Peace materials through Castilla Publishing Company in Eugene, Oregon (de Anda, 1997). Teacher training was not required to administer/teach this violence prevention program to the students as the materials and all instructions were clearly defined in the Project Peace Leader’s Manual. All teachers followed the instructions in the Manual and administered the materials during the course of the eight week academic quarter. In addition to the Leader’s Manual, the teachers were provided with Project Peace Workbooks and Project Peace
Test Booklets that were administered to each student. A videotape titled *Peace. Live It or Rest in It* (a free copy is available upon request from Richard Plepler, HBO) and a Scanning Relaxation audiotape (available from Castalia Publishing Company) was also used by teachers to facilitate Project Peace. Teachers were also required to assemble and create specific projects with the students based on explicit instructions provided in the Leader’s Manual.

The Health and Peer Education teachers who administered Project Peace were all New Jersey State certified teachers instructed by administrators to follow the materials/instructions in the Leader’s manual. To insure standardization of materials, the teachers all used the following schedule to administer/teach Project Peace to their students:

- **Week One:** Project Peace Pretest Administration
  - Session 1-Violence: Definition and Incidence
- **Week Two:** Session 2-What “Causes” or Leads to Violence?
  - Session 3-Calm Body Technique
- **Week Four:** Session 4-Identifying Triggers
  - Session 5-Clear Mind Technique
- **Week Five:** Session 6-Beliefs and Attitudes
  - Session 7-Trigger-Thoughts-Feelings-Actions
- **Week Six:** Session 8-Looking at the Results of Our Actions
  - Session 9-Putting it All Together
- **Week Seven:** Session 10-Group Presentations
Week Eight  Session 11-Review and Culmination Activity

Posttest Administration

Research Instruments

The following instruments were used to measure the variables examined in this study: 1) the School Climate Measure, 2) the Personal Anger Scale, 3) the Attitude Towards Violence Measure, 4) the Skills and Knowledge Measure and 5) the Monthly Behavior Report. In addition, basic demographic information was secured for each student at pre- and post-test including: date of birth, gender, age, grade and ethnicity. All five measures were given to each student prior to the first session as a pretest, and the same five measures were administered posttest upon completion of the program. Students' anonymity was maintained; they were not asked to provide their names on either pre-test or post-test measures. Each student was assigned a one to three digit identification number to be used during completion of the survey instruments.

As stated previously, Project Peace is designed for use with middle school and high school students who should demonstrate the 'readability' of the measures. According to de Anda (personal communication, 1 August, 2002), "all materials and measures were created to be read and understood by children as young as the third grade." No standardized method of determining readability was reported by the original researcher.

*The School Climate Measure (de Anda, 1999)*

This tool consists of 20 items designed to assess the degree of safety and security the students feel in their school environment (Appendix B). Questions examine specific areas of the school campus, assess the student's ability, as well as the school personnel's
ability, to manage threatening situations, and examine the threat posed by their classmates, including gangs and weapons. This tool taps into the student’s general view of the school climate as it relates to campus safety, as well as the adolescent’s relationships with his/her peers and school personnel with regards to the adolescents’s relationship to his/her feelings of school safety. Items are presented along a 5 point Likert-type scale: most of the time = 5, often = 4, about half of the time = 3, not very often = 2, and never = 1. The original researcher selected an even-numbered scale in order to “avoid the tendency in many adolescent populations to simply select the midpoint” (de Anda, 1999, p. 141). The measure yields a score that represents the student’s perceived sense of safety and security in his/her school environment. Higher scores indicate more secure feelings, while lower scores indicate less secure feelings. Of the 20 items, 8 are scored in reverse to prevent the occurrence of a response set and to decrease social desirability effects.

*The Personal Anger Scale (de Anda, 1999)*

This measure was designed to determine students’ methods of dealing with feelings of anger (Appendix B-Items 21-30). The scale was not identified by name in order to avoid the reporting of socially desirable responses. Thus, the items are attached to those of the School Climate Measure, which utilized the same five-point Likert scale discussed above. Higher scores demonstrate the student’s greater control over his/her anger, while lower scores demonstrate poorer anger control. There are a total of ten items on this scale; three items are reverse-scored.
The Attitude Toward Violence Measure (de Anda, 1999)

This instrument seeks to discover students’ beliefs about appropriate means of dealing with both violent and nonviolent disputes, their rationalization for the use of violence, the relationship between violence, respect, and reputation, and the need for and effect of weapons and gangs (Appendix C). Students indicate their agreement or disagreement to 20 items on a four-point Likert-type scale: strongly agree = 4, agree = 3, disagree = 2, and strongly disagree = 1. The instrument is scored such that a higher score demonstrates the endorsement of a more positive attitude towards nonviolence and nonviolent approaches to handling disagreements. Thirteen of the items are reverse-scored to control for response set and social desirability.

The Skills and Knowledge Measure (de Anda, 1999)

This tool seeks to evaluate how well the students incorporated the material of Project Peace into their cognitive and behavior repertoires (Appendix D). Fourteen true-false items and 11 multiple-choice questions are used to assess the student’s knowledge of the key points and information presented during the course of the program. The number of correct scores is tallied to provide a total score for each student with the highest possible score equaling 26.

The Monthly Behavior Report (de Anda, 1999)

This instrument consists of 20 items that are designed to allow the students to report the number of violent and nonviolent confrontations they either observed or were involved in over the course of the past month (Appendix E). Half of the items are designed to assess the student’s own experiences, while the other half are targeted at assessing the experiences of other students they have observed. A 5-point Likert scale
was used to answer the items with a response of 5 equaling 'almost every day,' 4
equaling 'many times a month,' 3 equaling 'a few times a month,' 2 equaling 'once or
twice a month, and 1 equaling 'never.'

Violent responses to potential confrontation and conflict include using weapons
and fighting. Examples of non-violent responses include using a mediator, walking away
from the situation, and talking out the issue with the other person. de Anda (1997)
reported that the items are grouped together to provide Violent and Nonviolent Behaviors
subtests.

Reliability and Validity

de Anda (1997) reported that pilot studies utilizing Project Peace were conducted
on two separate occasions. Both pilot studies were conducted in urban public schools in
Los Angeles, California. Pretests were administered immediately prior to participation in
Project Peace and posttests were administered “shortly after the final session” (de Anda,
1997, p. 7). Control groups were not used as school administration requirements and
ethical concerns were present. Thus, paired t-tests were conducted to determine if
significant changes occurred from pretest to posttest.

During the first pilot study, time constraints necessitated the completion of
program materials in a two-week period by offering daily sessions. This sample
consisted of 140 adolescents (73 males, 67 females), predominately ninth graders (89%),
ages 14-15 (83%) (de Anda, 1999). Latinos/Hispanics made up the largest ethnic group,
followed by African-Americans. de Anda (1997) reported that “while the difference did
not reach statistical significance, changes in the predicted direction were noted on the
three scales administered: the School Climate Measure, the Attitudes Toward Violence
Measure, and the Personal Anger Control Scale" (p. 7). Qualitative information from the students studied in this sample revealed that Project Peace had been a positive and enjoyable learning experience. de Anda (1997) concluded that a two-week time period was not sufficient to secure measurable cognitive and behavioral changes.

The second pilot study utilizing Project Peace was conducted over the course of five weeks; the sessions were conducted on a twice weekly basis (de Anda, 1999). The sample was comprised of 157 students (82 males, 75 females), predominately ninth graders (88%), and mostly fourteen to fifteen years of age (86%). Of the program participants, 61% identified themselves as Latino/Hispanic and 35% as African-American. Two new measures were added to the program resulting in a total of five scales: the School Climate Measure, the Attitudes Toward Violence Measure, the Personal Anger Scale, the Skills and Knowledge Measure, and the Monthly Behavior Report. While de Anda (1997) reported “Statistically significant” improvements from pretest to posttest were evident in four of the five measures” (p. 7), empirical data supporting this claim failed to be reported. School Climate Measure scores indicated that Project Peace contributed to an increase in students’ overall sense of safety in the school environment. Specifically, the scores demonstrated an increase in the extent to which school staff were able to intervene and mediate potential conflicts, and with regard to their feelings of safety and security in their relationships with their peers.

A decrease in the students’ acceptance of violent or aggressive behavior and an increase in their preference for nonviolent approaches to managing conflicts was also found. More specifically, “a decrease was noted in the belief that a person has the right to engage in violence given various provocations and in the need to respond with
violence to redress affronts to one’s reputation or signs of disrespect ("dissing")" (de Anda, 1997, p. 7).

de Anda (1997) reported a slight increase in the scores on the Personal Anger Scale, yet statistical significance was not reached. However, this may have been due to the fact that the original scale only contained five items. Subsequently, the measure was expanded to ten items. However, statistical data was not given to support these findings.

A “noteworthy” increase in scores on the Skills and Knowledge Measure demonstrated the students’ incorporation of concepts and skills presented to them during participation in Project Peace (de Anda, 1997, p. 7). At pretest, the average score of 69% correct increased to 74% at posttest. Similarly, the Monthly Behavior Report indicated changes in the students’ behaviors secondary to program participation. A decrease in the occurrence of violent behaviors and an increase in the use of nonviolent approaches to conflict resolution were reported. However, de Anda’s (1997) reporting of empirical validation of these findings was not presented.

According to de Anda (1997), only one of the pilot studies revealed ethnic differences. Both African-American and Latino participants reported a decrease in violent behavior as measured by the Monthly Behavior Report. However, the decrease was greater for the Latino students. In addition, few gender differences were recorded. Total scores on the Attitudes Toward Violence were greater for females than for males. Females also demonstrated a larger increase in their sense of safety in their peer interactions.

The present researcher was not able to secure information regarding the test-retest reliability of the five measures utilized in Project Peace; validity studies supporting this
intervention tool were not able to be secured. This highlights the need for statistical validation of Project Peace and provides support for the present study.

Statistical Analyses

All data were analyzed using SPSS 11.0. Tests of normality were completed to demonstrate the usefulness and appropriateness of these measures with this high school sample. In addition, total scores were calculated for each of the five scales and the pretest and posttest scores were matched for each participant. Paired (or dependent) t tests analyses were conducted on Hypothesis #1-Hypothesis #5 to determine if there was a statistically significant change in scores on the measure of Project Peace from pretest to posttest. The use of paired (dependent) t tests is justified as this type of statistical analysis is designed to measure the same group of individuals over a period of time (i.e., pre- and posttest) on a continuous dependent variable (score on the School Climate Measure). For each measure, the independent variable was the student's grade (9th) and the dependent variables were the scores on each of the five measures and their subtests.

For Hypothesis #6-Hypothesis #10, independent t tests were used to examine gender and ethnic differences on posttest scores. This is an appropriate statistical method to employ as this type of analysis is conducted when there is a single, continuous dependent variable (posttest scores on each of the 5 measures) and a single independent variable with two categories (gender-male and female; ethnicity-minority and non-minority). An independent t test is used to see if there are statistically significant differences between the two independent groups on the continuous dependent variable.
Power Analysis

The “power” of a statistical test refers to the probability that the test will yield statistically significant results given that the phenomenon being tested is in fact present (Cohen, 1988). Power, therefore, is the probability of rejecting the null hypothesis when it should be rejected. Power is defined at 1-beta where beta is the probability of committing a Type II error, or erroneously failing to reject the null hypothesis. Power is a function of sample size, effect size, and p-value, and can range from zero to one. Zero means that there is no chance of rejecting the null hypothesis, while a score of one indicates that it will be rejected every time. For repeated measures designs, power is influenced by the ratio of N/p, or the sample size divided by the number of variables. Stevens (1997) suggests a ‘rule of thumb’ to use when considering the N/p ratio such that an N/p ratio of 20 to 1 or higher is desirable for repeated measures designs. This implies that there be a minimum of 20 subjects for each variable. Since one repeated measure in each analysis is utilized in the present study, a sample of at least 40 or more would be the minimum amount required; the current sample size of 151 exceeds this minimum.

Power analyses are typically done prior to data collection to determine the number of participants that are necessary to achieve a significant result with the proposed research question and planned statistical analyses. With the data utilized in the present study as being archival, it was not possible to complete a priori power analyses. Information about alpha and effect size can be used to estimate the number of subjects that would be required to achieve a power level of .8 (or higher). The following is a rough estimate of power using the G*Power program (Erdfelder, Faul & Buchner, 1996). The “rule of thumb” (as discussed above) regarding effect size will be used because there
was no empirical effect size estimate to use with the present data due to its archival nature. Assuming a choice alpha of .05, a low effect size of .15, and a sample size of 151, one repeated measure with two levels has a high power estimate of .99. This implies that a sample size of 151 will give a 99% chance of rejecting the null hypothesis when it should be rejected.
CHAPTER IV

RESULTS

This chapter presents the results of the statistical analyses generated by the data collected in this study. The reliability and descriptive statistics for the five measures utilized in Project Peace are presented first, followed by the results of the hypotheses tested. The chapter concludes with a summary of the results. Descriptive statistics for the study sample were provided in Chapter III.

Reliability of Project Peace Measures

This section provides information regarding the internal consistency of the items of the five Project Peace measures. Alpha coefficients for the original sample used by de Anda (1999) and the alpha coefficients for the present sample are given.

School Climate Measure (SCM)

Cronbach's alpha was performed in the original study to establish the internal consistency of the measure (de Anda, 1999). Three high school samples were used and yielded alpha coefficients which suggest a high degree of internal consistency: pretests, .78 (n = 140), .82 (n = 157), .76 (n = 194); posttests, .83 (n = 140), .80 (n = 157), and .81 (n = 198). Cronbach's alpha was performed on the present sample and yielded a high degree of internal consistency: pretest, .82 (n = 198) and posttest, .90 (n = 189).
Personal Anger Scale

Initial Cronbach’s alpha was performed (de Anda, 1999) and yielded high rates of internal consistency: pretest, .78 (n = 200), and posttest, .77 (n = 189) (de Anda, 1999). The present sample confirmed the high rates of internal consistency of the measure with a pretest alpha coefficient of .84 (n = 200) and a posttest alpha coefficient of .82 (n = 189).

Attitudes Toward Violence

Analyses using Cronbach’s alpha reported in the original study utilized three high school samples. The following alpha coefficients demonstrate the reliability of this measure: pretest, .67 (n = 140), .78 (n = 157), .77 (n = 187), and posttest, .72 (n = 140), .76 (n = 157), and .83 (n = 187). The present sample confirmed the reliability of this measure yielding a pretest alpha coefficient of .84 (n = 197), and posttest alpha coefficient of .70 (n = 184).

Skills and Knowledge Measure

A high degree of internal consistency was reported in the original study design as demonstrated by the following Cronbach’s alpha reliability coefficients: pretest, .71 (n = 173), and posttest, .84 (n = 196). A moderate degree of internal consistency was found in the present sample on the pretest (alpha coefficient, .65, n = 191), and a high degree of internal consistency was found on the posttest of the present sample (alpha coefficient, .86, n = 184).

Monthly Behavior Report

Reliability coefficients were computed with the original sample (de Anda, 1999) to determine the measure’s internal consistency for the Nonviolent Behavior items of the Monthly Behavior Report (pretest, coefficient alpha, .57, n = 148, posttest, coefficient
alpha, .67, n = 147). The sample utilized in the present research yielded higher rates of internal consistency on the Nonviolent Behaviors items than the original sample demonstrating a higher rate of reliability: pretest, coefficient alpha, .72 (n =196) and posttest, coefficient alpha, .72 (n = 180).

Descriptive Statistics

Table 2 demonstrates that the mean for the School Climate Measure (SCM) posttest was lower than the mean for the School Climate Measure pre-test. There was a substantial drop in the Monthly Behavior Report (MBR) scores from pre-test to posttest.

Small differences between pre-test and posttest means on the Personal Anger Scale (PAS), Attitudes Toward Violence (ATV), and Skills and Knowledge Measure (SKM) were found.

Table 2

Descriptive Statistics for Project Peace Measures and Corresponding Subtests

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>SCM</td>
<td>76.68</td>
<td>10.18</td>
</tr>
<tr>
<td>PAS</td>
<td>35.50</td>
<td>7.08</td>
</tr>
<tr>
<td>ATV</td>
<td>63.27</td>
<td>7.60</td>
</tr>
<tr>
<td>SKM</td>
<td>19.93</td>
<td>2.98</td>
</tr>
<tr>
<td>MBR</td>
<td>43.75</td>
<td>7.84</td>
</tr>
</tbody>
</table>

*Note. n = 151*
Hypotheses

Hypothesis 1

There will be a significant increase in the sense of safety in the school environment among program participants as demonstrated by an increase in the scores on the School Climate Measure from pretest to posttest.

Based on the results of the t test, Hypothesis 1 was not supported by the data. Although the paired samples test was significant (Table 3), examination of the means indicates that the difference occurred in the opposite direction than predicted. Scores on the School Climate Measure were higher at pretest ($M = 76.68$) than posttest ($M = 71.41$). The data suggest that students’ level of safety and security was higher prior to participating in Project Peace.

Hypothesis 2

There will be a significant increase in the students’ level of anger control as demonstrated by an increase in scores on the Personal Anger Scale from pretest to posttest time.

Hypothesis 3

There will be a significant increase in the students’ scores from pretest to posttest on the Attitudes Toward Violence Measure.

Hypothesis 4

There will be a significant increase in the students’ scores on the Skills and Knowledge Measure from pretest to posttest time.

Hypotheses 2-4 were not supported by the data. The paired samples t tests were not significant; scores on the Personal Anger Scale, Attitudes Toward Violence Measure,
and Skills and Knowledge measure were unchanged secondary to the students' participation in Project Peace (Table 3).

Hypothesis 5

There will be a statistically significant decrease in the students' scores on the Occurrence of Violent Behavior items of the Monthly Behavior Report after program completion.

This hypothesis was supported by the data. There was a significant decrease in the violent behavior scores from pretest to posttest (Table 3). This indicates a decrease in the frequency of violent behavior participated in or witnessed by the participants of Project Peace from pretest to posttest.

Table 3

Paired Two-Tailed t Tests of Project Peace Measures

<table>
<thead>
<tr>
<th>Project Peace Measure</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>150</td>
<td>3.60*</td>
</tr>
<tr>
<td>PAS</td>
<td>150</td>
<td>1.83</td>
</tr>
<tr>
<td>ATV</td>
<td>150</td>
<td>0.56</td>
</tr>
<tr>
<td>SKM</td>
<td>150</td>
<td>-8.42</td>
</tr>
<tr>
<td>MBR</td>
<td>150</td>
<td>3.78*</td>
</tr>
</tbody>
</table>

Note. *p ≤ .001
Hypotheses 6-10

To review, these hypotheses tested gender and ethnic differences across the five Project Peace measures at posttest. An independent samples t test was appropriate for examining these hypotheses, as there was one continuous dependent variable (scores on the Project Peace measures) and a single independent variable with two categories (gender and minority, separately).

Gender Comparisons

In the present sample, there were more females (n = 85) than males (n = 65). Therefore a t-test that does not assume equal variances was used for gender comparisons. Table 4 presents descriptive statistics for all five Project Peace measures at posttest time across the gender groups. Females scored higher than males on the Personal Anger Scale. Females also scored higher than males on the School Climate Measure however both groups had a large standard deviation. Gender differences were very small on the Attitudes Toward Violence Measure, the Skills and Knowledge Measure, and the Monthly Behavior Report (Table 4).

Hypothesis 6A

At posttest, female and male participants’ scores on the School Climate Measure will be significantly different.

Based on the results of the data, this hypothesis was not supported. An independent t-test with equal variances not assumed revealed a non-significant result (Table 5). This suggests there were no differences between males and females with regard to their posttest scores on the School Climate Measure.
Table 4

Descriptive Statistics for Gender Comparisons on Project Peace Posttest Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>Male</td>
<td>65</td>
<td>68.67</td>
<td>14.87</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>85</td>
<td>73.43</td>
<td>16.85</td>
</tr>
<tr>
<td>PAS</td>
<td>Male</td>
<td>65</td>
<td>32.37</td>
<td>7.71</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>85</td>
<td>35.47</td>
<td>8.75</td>
</tr>
<tr>
<td>ATV</td>
<td>Male</td>
<td>65</td>
<td>61.87</td>
<td>8.64</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>85</td>
<td>63.53</td>
<td>8.15</td>
</tr>
<tr>
<td>SKM</td>
<td>Male</td>
<td>65</td>
<td>19.12</td>
<td>5.01</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>85</td>
<td>20.93</td>
<td>4.18</td>
</tr>
<tr>
<td>MBR</td>
<td>Male</td>
<td>65</td>
<td>16.40</td>
<td>5.61</td>
</tr>
<tr>
<td>(Nonviolent Behavior)</td>
<td>Female</td>
<td>85</td>
<td>16.72</td>
<td>4.91</td>
</tr>
</tbody>
</table>

Table 5

Gender Comparisons of Project Peace Measures: Independent Samples t Tests

<table>
<thead>
<tr>
<th>Project Peace Measure</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>144.94</td>
<td>-1.84*</td>
</tr>
<tr>
<td>PAS</td>
<td>144.95</td>
<td>-2.30**</td>
</tr>
<tr>
<td>ATV</td>
<td>133.56</td>
<td>-1.20*</td>
</tr>
<tr>
<td>SKM</td>
<td>123.57</td>
<td>-2.35**</td>
</tr>
<tr>
<td>MBR</td>
<td>127.56</td>
<td>-3.63*</td>
</tr>
</tbody>
</table>

Note. *p = ns, **p < .05
**Hypothesis 7A**

At posttest, female and male participants’ scores on the Personal Anger Scale will be significantly different.

This hypothesis was supported by the data. The independent samples \( t \)-test with equal variances not assumed on the Personal Anger Scale was significant (Table 5). Females had higher mean scores on the Personal Anger Scale (\( M = 35.47 \)) than males (\( M = 32.37 \)). This suggests that females exerted greater control over their expression of anger.

**Hypothesis 8A**

At posttest, female and male participants’ scores on the Attitudes Toward Violence Measure will be significantly different.

This hypothesis was not supported by the data. The independent samples \( t \) test on the Attitudes Toward Violence Measure was not significant (Table 5). At posttest, there was no difference between males’ and females’ scores on the Attitudes Toward Violence Measure.

**Hypothesis 9A**

At posttest, female and male participants’ scores on the Skills and Knowledge Measure will be significantly different.

This hypothesis was supported by the data. The independent samples \( t \)-test with equal variances not assumed on the Skills and Knowledge Measure was significant (Table 5). Females had higher mean scores on the Skills and Knowledge measure (\( M = \)
20.93) than males (M = 19.12) indicating that they assimilated more of the information and skills presented to them during participation in Project Peace.

*Hypothesis 10A*

At posttest, female and male participants’ scores on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report will be significantly different.

This hypothesis was not supported by the data. Based on the results of the data, this hypothesis was not supported. An independent *t*-test with equal variances not assumed revealed a non-significant result (Table 5). This suggests that there were no differences between males’ and females’ posttest scores on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report.

**Ethnicity Comparisons**

Although hypotheses were made with regard to specific ethnic groups, the small number of participants in each minority group did not allow for individual *t* tests to be conducted. Therefore, statistical comparisons were made between non-minority (Caucasians) and minority (African Americans, Asian Americans, and Latinos/Hispanics) groups.

Table 6 provides the descriptive statistics for the ethnicity comparisons made in the present study. It shows that the posttest means on the School Climate Measure, Skills and Knowledge Measure, and Monthly Behavior Report were nearly identical for Minority and Non-Minority participants. There were small differences between Minority and Non-Minority means on the Personal Anger Scale and Attitudes Toward Violence.
Table 6

Descriptive Statistics for Ethnic Comparisons on Project Peace Posttest Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ethnicity</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>Minority</td>
<td>22</td>
<td>71.64</td>
<td>17.75</td>
</tr>
<tr>
<td></td>
<td>Non-Minority</td>
<td>129</td>
<td>71.37</td>
<td>15.88</td>
</tr>
<tr>
<td>PAS</td>
<td>Minority</td>
<td>22</td>
<td>32.23</td>
<td>8.87</td>
</tr>
<tr>
<td></td>
<td>Non-Minority</td>
<td>129</td>
<td>34.49</td>
<td>8.32</td>
</tr>
<tr>
<td>ATV</td>
<td>Minority</td>
<td>22</td>
<td>65.00</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>Non-Minority</td>
<td>129</td>
<td>62.45</td>
<td>7.97</td>
</tr>
<tr>
<td>SKM</td>
<td>Minority</td>
<td>22</td>
<td>19.86</td>
<td>5.05</td>
</tr>
<tr>
<td></td>
<td>Non-Minority</td>
<td>129</td>
<td>20.11</td>
<td>4.66</td>
</tr>
<tr>
<td>MBR (Nonviolent Behavior)</td>
<td>Minority</td>
<td>22</td>
<td>16.04</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>Non-Minority</td>
<td>129</td>
<td>16.74</td>
<td>5.36</td>
</tr>
</tbody>
</table>

To determine if there were significant differences between minority and non-minority groups, independent samples t tests (equal variances not assumed) were conducted. Table 7 shows the t scores for each of the measures between ethnic groups. All differences between groups were not significant. The results indicate that minority and non-minority participants did not differ with respect to their posttest scores on all five of the Project Peace measures. The specific ethnicity hypotheses will be presented in the following sections elaborating on the differences across ethnic groups.
Table 7

Independent Equal Variance Not Assumed t Tests for Project Peace Measures Across Ethnic Groups

<table>
<thead>
<tr>
<th>Measure</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>27.04</td>
<td>.95*</td>
</tr>
<tr>
<td>PAS</td>
<td>27.68</td>
<td>.28*</td>
</tr>
<tr>
<td>ATV</td>
<td>25.45</td>
<td>.27*</td>
</tr>
<tr>
<td>SKM</td>
<td>27.44</td>
<td>.83*</td>
</tr>
<tr>
<td>MBR</td>
<td></td>
<td>.12</td>
</tr>
<tr>
<td>(Nonviolent Behavior)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * p = ns

Hypothesis 6B

At posttest, Asian American, African American and Latino participants’ scores on the School Climate Measure will be significantly different from Caucasian participants’ scores.

There was an inadequate sampling of the various ethnic groups to test the predicted hypotheses. However, examination of the means of the School Climate Measure posttest reveals that the Asian and African American participants scored higher than Caucasians, but the Latinos scored lower (Table 8). While it was predicted that ethnicity minority participants’ were likely to be more sensitive to the school climate than Caucasians, the results did not support this hypothesis.
Hypothesis 6C

Among ethnic minority participants, African American and Latino participants' scores on the School Climate Measure will be significantly different from Asian American participants' scores.

This hypothesis was not supported by the data. An examination of the means of the posttest School Climate Measure reveals that African American participants scored higher than Asian American participants. However, the Latinos scored lower than African Americans and Asian Americans (Table 8).

Hypothesis 7B

At posttest, Asian American, African American and Latino participants' scores on the Personal Anger Scale will be significantly different from Caucasian participants' scores.

An examination of the means of the posttest Personal Anger Scale (Table 8) reveals that Caucasians scored higher than all three groups. Although the difference was not significant, the results reveal that differences may exist across ethnic groups with regard to anger control.
Table 8

*Descriptive Statistics for Ethnic Groups on the Posttest Project Peace Measures*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ethnic Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM</td>
<td>Caucasian</td>
<td>129</td>
<td>71.37</td>
<td>15.88</td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>5</td>
<td>61.80</td>
<td>26.88</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>2</td>
<td>75.00</td>
<td>7.07</td>
</tr>
<tr>
<td></td>
<td>Asian American</td>
<td>7</td>
<td>72.86</td>
<td>14.47</td>
</tr>
<tr>
<td>PAS</td>
<td>Caucasian</td>
<td>129</td>
<td>34.48</td>
<td>8.31</td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>5</td>
<td>25.00</td>
<td>12.47</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>2</td>
<td>30.50</td>
<td>12.02</td>
</tr>
<tr>
<td></td>
<td>Asian American</td>
<td>7</td>
<td>34.29</td>
<td>7.72</td>
</tr>
<tr>
<td>ATV</td>
<td>Caucasian</td>
<td>129</td>
<td>62.43</td>
<td>7.97</td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>5</td>
<td>65.40</td>
<td>10.92</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>2</td>
<td>58.50</td>
<td>12.02</td>
</tr>
<tr>
<td></td>
<td>Asian American</td>
<td>7</td>
<td>65.71</td>
<td>11.63</td>
</tr>
<tr>
<td>SKM</td>
<td>Caucasian</td>
<td>129</td>
<td>20.11</td>
<td>4.66</td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>5</td>
<td>20.00</td>
<td>3.76</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>2</td>
<td>18.00</td>
<td>7.07</td>
</tr>
<tr>
<td></td>
<td>Asian American</td>
<td>7</td>
<td>20.14</td>
<td>5.58</td>
</tr>
<tr>
<td>MBR</td>
<td>Caucasian</td>
<td>129</td>
<td>16.74</td>
<td>5.37</td>
</tr>
<tr>
<td></td>
<td>(Nonviolent Behavior)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Latino/Hispanic</td>
<td>5</td>
<td>14.80</td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>2</td>
<td>10.50</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Asian American</td>
<td>7</td>
<td>17.42</td>
<td>5.68</td>
</tr>
</tbody>
</table>

*Hypothesis 7C*

Among ethnic minority participants, African American and Latino participants' scores on the posttest Personal Anger Scale will be significantly different from Asian American participants' scores.
An examination of the means of the posttest Personal Anger Scale (Table 8) reveals that Asian Americans scored higher than both African Americans and Latinos. The results were consistent with the hypothesis. This suggests that differences among ethnic minorities with regard to perceived anger control may exist.

Hypothesis 8B

At posttest, Asian American, African American and Latino participants' scores on the Attitudes Toward Violence Measure will be significantly different from Caucasian participants' scores.

Inspection of the means of the posttest Attitudes Toward Violence (Table 8) reveals that Asian Americans and Latinos scored higher than Caucasian participants, while African Americans scored lower. The results suggest that association with an ethnic minority may not have differentially affected Project Peace participants' scores on the Attitudes Toward Violence Measure. This was inconsistent with the stated hypothesis.

Hypothesis 8C

Among ethnic minority participants, African American and Latino participants' scores on the posttest Attitudes Toward Violence Measure will be significantly different from Asian American participants' scores.

Asian Americans and Latinos had nearly identical mean scores on the Attitudes Toward Violence Measure (Table 8). Asians and Latinos had higher scores than African Americans on the Attitudes Toward Violence Measure posttest. The results were not consistent with the hypothesis. Asian Americans and Latinos may have similar beliefs
regarding the endorsement of non-violent means of addressing conflict compared to their African American peers.

Hypothesis 9B

At posttest, Asian American, African American and Latino participants' scores on the Skills and Knowledge Measure will be significantly different from Caucasian participants' scores.

African Americans scored lower than any other ethnic minority group on the Skills and Knowledge Measure (Table 8). The mean scores of the Asian Americans and Latinos on the Skills and Knowledge Measure posttest were nearly equivalent to the means of Caucasians. This indicates that these two minority groups extracted nearly as much information and skills from Project Peace as the Caucasian participants. While it was expected that Project Peace would provide more skills and knowledge to ethnic minority participants, the results do not support this prediction.

Hypothesis 9C

Among ethnic minority participants, African American and Latino participants' scores on the posttest Skills and Knowledge Measure will be significantly different from Asian American participants' scores.

Inspection of the means of the posttest Skills and Knowledge Measure (Table 8) reveals that the Asian American participants mean scores on the Skills and Knowledge Measure were nearly equal to the Latinos, and the African American's scores were lower. These results suggest that cultural influences were not as influential in determining the amount of program knowledge the participants extracted from Project Peace as originally predicted.
Hypothesis 10B

At posttest, Caucasian and Asian American participants’ scores on the Nonviolent Behavior items of the Monthly Behavior Report will be significantly different from Latino and African American participants’ scores.

Caucasians and Asian American participants scored higher than Latinos and African Americans on the nonviolent behavior items of the Monthly Behavior Report. These findings indicate that Caucasian and Asian American participants reported more nonviolent responses to conflict than their Latino and African American peers. This was consistent with the stated hypothesis.

Summary

The results of this study suggest that Project Peace may not be a useful violence prevention tool for use with a population of suburban New Jersey adolescents. The data provided support Hypothesis 5 indicating that there was a significant decrease in the participants’ scores on the Occurrence of Violent Behavior items of the Monthly Behavior Report. Gender comparisons revealed significant differences on the Personal Anger Scale with females reporting higher scores than males, supporting Hypothesis 7A. A significant difference between males and females was observed on the Skills and Knowledge Measure; females’ scores were significantly higher than males on the posttest Skills and Knowledge Measure. While the ethnicity comparisons provided interesting information, they must be made with caution since the sample sizes of the ethnic minority participants was very small. The results presented here will be elaborated on in Chapter V.
CHAPTER V
DISCUSSION OF RESULTS
AND RECOMMENDATIONS

This chapter discusses the results of the present study as they relate to the current literature. The results are discussed in the context of the theoretical framework of Project Peace as well as the previously discussed factors affecting violence in the schools including the school climate, anger, adolescent attitudes towards violence and conflict resolution skills. The impact of gender and ethnicity across the Project Peace measures will also be presented. Additionally, an evaluation of Project Peace as a violence prevention and conflict-resolution program is provided in light of the current findings. Limitations of this research are acknowledged and suggestions for future research are offered.

Discussion of Results

Throughout the present study, it has been demonstrated that school violence is a public health concern that affects the social-emotional development and education of students in the United States. Likewise, there exists a paucity of empirical validation supporting the effectiveness of one or more violence prevention programs useful in managing school violence. Thus, the objectives of this research were twofold: 1) to provide the adolescent participants with a violence prevention/conflict resolution
program (Project Peace) designed to address the issue of school violence; and 2) to provide empirical data about violence prevention program outcomes where it is lacking. Similarly, this study sought to examine gender and ethnic differences as they relate to the various aspects of Project Peace (school climate, anger, attitudes toward violence and conflict resolution skills). Although the findings of the present study were mixed, they provide some insight into the complexity of school violence and its prevention. They also provide some useful information to the northeast New Jersey high school examined in this study regarding possible school climate concerns and violence prevention/conflict resolution issues that should be addressed to serve the student population needs. This section serves to examine each of the hypotheses and outcomes. It will be broken down to examine the overall findings, and gender and ethnicity findings related to the following topics: 1) the school climate, 2) anger, 3) attitudes toward violence, 4) conflict resolution skills, and 5) skills and knowledge acquisition. Comparisons to de Anda’s (1999) results will be presented. However, due to the lack methodological controls causal relationships between the two studies cannot be made with confidence. The chapter will conclude with a summary of results and directions for future research.

School Climate

The first hypothesis was designed to assess the effectiveness of Project Peace in increasing the participants’ feelings of safety and security within the context of the school environment/school climate. Hypothesis 1 speculated that there would be a significant increase in the participants’ sense of safety in the school environment as demonstrated by an increase in the scores on the School Climate Measure from pretest to posttest. The data revealed a significant difference. However the results were in the opposite direction
than originally predicted. The results indicate that the sample of 151 students who participated in Project Peace reported more feelings of safety and security within their school environment prior to program participation than at the end of training.

The results of the present study suggest that participation in Project Peace did not increase the degree of safety and security the students felt while they were on school grounds. The literature indicates that for most students, creating a secure academic environment including fostering peer interactions, developing positive staff-student relationships, and improving the physical school climate enhances students' perceptions of school security (McNeely et al., 2002; Stipek et al., 1999; Walker, 1993). Likewise, exposure to prevention/intervention programs designed to improve school connectedness and school safety has been demonstrated to increase students' feelings of security in the school environment (Caulfield, 2000; Wheeler & Stomfay-Stitz, 2000). Therefore, one would expect that the adolescents who participated in Project Peace would have demonstrated an increase in feelings of safety and security post program participation.

One reason for the contradictory findings of this sample may be in part to the lack of changes made to the school environment during the course of Project Peace. Research has demonstrated that evaluations of school climate and the culture of the school environment are useful in providing administrators and teachers with information regarding their school's degree of safety, but little changes in student/teacher attitudes can be expected if school-wide programmatic changes are not made (Walker, 1993). Similarly, perceptions of the school climate have been found to be somewhat stable unless interventions and changes in the school environment are made on a more global scale over time (Walker, 1993). Therefore, the absence of any academic or social
interventions aimed at improving the larger school environment/climate including the physical space, peer interactions, and student-teacher relationships during program initiation may provide a possible explanation of the results obtained in the present study.

A second reason why the present study yielded results in the opposite than predicted direction may be related to the developmental stage of the sample of students examined. Examining the results in a developmental and cognitive framework may provide an explanation for the current findings. The students in this study were ninth graders in Health and Peer education classes. As discussed in Chapter II, the adolescents in this sample were in the stage of life in which the key Eriksonian task is identity development (Berger, 1998). Thus it is likely that the participants in the present study were facing the task of identity versus role confusion. As such, feelings of instability and insecurity in one area of life (identity development), is likely to lead to feelings of insecurity in others (school) (Berger, 1998). Thus the developmental stage of Project Peace participants may have affected their reporting of feelings of safety and security in the school environment.

A third explanation for the present findings may simply be the result of program participation; the Hawthorne Effect. While the participants had not initially been aware of their school climate, participation in Project Peace may have encouraged more thought about the academic environment. This may have resulted in more critical examination of the school climate resulting in a decrease in the students’ scores on the School Climate Measure from pretest to posttest.

While de Anda (1999) reported “a statistically significant difference in the sense of safety in the school environment among program participants” (p. 141), the sample examined was considerably different in terms of demographic characteristics than the
sample in the present study. The original sample consisted of ethnically diverse, urban youth from inner city Los Angeles. It is likely that these demographic factors contributed to those students' perceptions of the school climate. de Anda (1999) reported that issues of school safety and security were paramount for the high school sample in her study. Administrators and students were concerned about the wide-spread increase in school violence including gang-related brawls and weapon use that was occurring at their school (de Anda, personal communication, 1 August, 2002). However, the issue of school violence was not as pervasive in the present study.

While the administrators of Roxbury High School reported a need to provide their students with violence prevention training and reported concerns about an increase in verbal altercations and school-ground fights, they did not indicate that overall school safety and security was an issue that needed to be addressed. Therefore it is likely that for de Anda's (1999) sample, the issue of school safety and security was more pressing than it was for the present sample of primarily white, suburban northeast adolescents.

Exposure to Project Peace may have provided the students in de Anda’s (1999) study with knowledge and skills to increase their sense of safety on the school campus. Research has demonstrated that empowering students in their environments significantly increases school attachment and student commitment (Kenny & Watson, 1999), which results in a decreased likelihood to engage in risky behaviors including violence and substance use (Kuperminc et al., 2001). Preliminary research has indicated that violence prevention programs are likely to demonstrate the greatest impact on minority populations as they offer minority group members the opportunity to understand the social norms and values of the majority population (Domitrovich & Greenberg, 2000;
Farrell & Meyer, 1997; Leff, 2001). Since the sample of the students in the present study were mostly of non-minority descent, participation in Project Peace may have simply heightened their awareness of the school climate initiating more critical examinations of their sense of safety and security in the school environment.

de Anda (1999) indicated that the Monthly Behavior Report:

May be most useful simply on an item by item basis. That is, it provides information about the frequency of various types of behaviors on the school campus, which then can be used to determine the specific problems and strengths within the student body and the focus of any interventions deemed necessary. (p. 100)

Perhaps the same logic can be applied to the School Climate Measure. Such an analysis would allow for school administrators and teachers to determine the areas of need for their particular student body. It is likely that the staff of the New Jersey High School would secure important information about the needs of their students with regard to school safety and security perceptions through meaningful evaluation of the outcomes of Project Peace, in general, and the School Climate Measure, in particular.

To summarize, the outcomes of the present study with regard to the school climate indicate that, in general, participation in Project Peace did not serve to increase students' feelings of safety and security in the school environment. Program participation appears to have heightened the participants' perception of the school climate.

The outcomes of the School Climate Measure were also examined to uncover the effects of demographic characteristics on the students' perceptions of the school climate.
More specifically, Hypothesis 6A speculated that at posttest, female and male participants' scores on the School Climate Measure would be significantly different. The results of the present study revealed that there were no differences between males and females with regard to their posttest scores on the School Climate Measure.

As mentioned in Chapter II, there is a paucity of studies that have examined gender differences with regard to the school climate. However, one study indicates that for boys, perception of the school environment affects their behavior in the academic setting. Kuperminc et al. (2001) concluded that for male adolescents, positive school climate perceptions serve as a protective barrier against externalizing behaviors including fighting and verbal altercations. The results of the present study do not support these findings. However, additional research has shown that students' perceptions of safety and security in the school environment is a stronger predictor of fear of victimization than gender (Astor et al., 2002; Benbenishty et al., 2002). Additionally it has demonstrated that the promotion of positive student interactions and opportunities for cooperative learning provides students with the opportunity to engage in positive personal interactions in the learning environment thus fostering feelings of school connectedness (Wheeler & Stomfray-Stitz, 2000). While no direct changes were made in the school climate at Roxbury High School during Project Peace implementation, the possibility exists that the teachers' generally created classroom environments that allowed for positive peer interactions between students including male-female interactions. Such an environment likely contributed to overall positive peer interactions and more positive school climate perceptions across gender groups.
Given that the general hypothesis speculating an increase in students’ feelings of safety and security in the school environment revealed a significant difference from pretest to posttest, one would expect gender differences to emerge. However it is noteworthy to mention that gender differences with regard to school climate perceptions were evaluated at posttest only. At posttest, male and female differences may not have emerged as both groups may have demonstrated a decrease in feelings of school safety and security at the conclusion of Project Peace. It would have been interesting to examine the changes in gender groups from pretest to posttest with regard to safety and security in the school environment. In light of the current findings and the paucity of literature in this domain, future research directed at examining specific gender differences in school climate perceptions are clearly needed.

The present study was also interested in examining ethnic differences with regard to the school environment. Firm conclusions about the differences found in this study cannot be made with accuracy due to the extremely small sample of students in each minority group (African Americans, n = 2; Asian Americans, n = 7; Latino/Hispanic Americans, n = 5). Additionally, the paucity of literature examining ethnic differences with regard to perceptions of school safety and security makes drawing causal inferences about minority and non-minority differences with regard to the school climate nearly impossible. However, the results of the present study provide some interesting information regarding the participants’ perceptions of safety and security in their northeast New Jersey high school.

Hypothesis 6B stated that at posttest, Asian American, African American, and Latino participants’ scores on the School Climate Measure would be significantly
different from Caucasian participants' scores. This hypothesis was initially designed to examine differences in school climate perceptions among each minority group separately (Asians, African Americans and Latinos) and non-minority (Caucasian) Project Peace participants. However, since there were inadequate sampling sizes to make comparisons between each ethnic minority separately, all minority groups were merged into one category labeled non-minority participants. (This grouping was utilized for all between group comparisons made in the present study.) The results were not significant indicating that there were no differences between minority and non-minority participants' feelings of safety and security in the school environment. At posttest time, Asian and African Americans reported slightly more feelings of safety and security in the school environment than Caucasians, while Latinos reported slightly less school safety feelings.

Additionally, it was predicted that among ethnic minority participants, African American and Latino participants' scores on the School Climate Measure would be significantly different from Asian American participants' scores (Hypothesis 6C). However, comparisons of the means on the School Climate Measure did not support either of these hypotheses. Among minority groups, African American participants indicated the highest level of school safety feelings while Latinos reported the lowest level of school safety feelings.

As reported in Chapter II, no literature to date has specifically examined the effects of the school climate on minority versus non-minority students. Additionally, research has demonstrated that minority students are often at-risk for involvement in violent crime as both victims and perpetrators (Funk et al., 1999; U. S. Department of Health and Human Services, 2001) and, academic and social difficulties (Feng &
Cartledge, 1996; Goldstein & Conoley, 1997; Ramirez 1989). Therefore, it seems likely that minority students would be likely to have negative perceptions of their school climate and a decreased sense of safety and security in their school environment.

Despite the lack of studies regarding school climate perceptions among ethnic minority students, an examination of multicultural research may provide some insight into the results obtained in the present study. As stated previously, there were no significant differences between minority and non-minority participants' scores on the School Climate Measure at posttest time. Nor were significant differences found among minority participants. A possible explanation for this finding is that the minority participants had developed a secure sense of 'ethnic identity' (Phinney, 1990) allowing for an integration of their culture of origin and the dominant culture. This well developed sense of ethnic identity could have manifested itself in feelings of safety and security in the school environment such that members of minority groups did not feel threatened or insecure in their academic environment when compare to their non-minority peers.

Additionally, it seems plausible that the unique features of an individual's culture would differentially affect one's perception of the school climate. For example, the traditional Asian viewpoint is collective (Obuchi & Takahashi, 1994), therefore members of this group are more likely to be concerned about the larger group or context in which they function and interact. Based on this worldview, it would seem logical that Asian American students would be more sensitive to their environment including the school environment. Conversely, Hispanics/Latinos and African American cultures typically adhere to 'culture of honor'-a collectivistic life perspective that values family and close friends (Cartledge & Millburn, 1996). When the school climate is considered, perhaps
members of these cultural groups are more concerned and more sensitive to the functioning of the individuals in their sub-group or sub-culture than members of a more collectivistic culture such as the Asian American culture.

Based on the differences in ethnic minority worldviews, one would have expected differences to arise among minority participants on the School Climate Measure. However, this was not the case in the present study. It is likely that additional confounding variables associated with ethnicity including socio-economic status, degree of acculturation and immigration status affected the minority students' school climate perceptions (Astor et al., 2002; Benbenschity et al., 2002; Soriano & Soriano, 1994).

Additionally, the School Climate Measure may not be sensitive to the cultural nuances of various ethnic groups limiting its usefulness with minority populations. Cultural dictates, morals and values are also likely to impact one's evaluation of the academic environment. The extremely small sample sizes of the minority participants does not allow for causal inferences about the present results to be made. Clearly culturally sensitive research is needed in evaluations of the school climate to adequately address the specific needs of each individual cultural group.

The results of the School Climate Measure indicate that participation in Project Peace did not contribute to fostering a sense of safety and security among the participants in the present study. In fact, at the conclusion of Project Peace, participants reported less feelings of safety and security in the school environment than they did prior to program participation. Similarly, gender and ethnic differences were not found with regard to the participants' perceptions of the school climate. Therefore, the results indicated that for the sample of participants from a northeast New Jersey high school, students' feelings of
safety and security in the school environment were significantly increased as a result of participation in Project Peace.

*Anger*

The second hypothesis purported that the Project Peace participants would demonstrate a significant change with regard to their ability to exert control over their anger from pretest to posttest time. It was predicted that the students' scores on the Personal Anger Scale would increase significantly from pretest to posttest time demonstrating increased anger control. This hypothesis was not supported by the data as the participants' mean scores on the Personal Anger Scale did not significantly change from pretest to posttest. The results suggest that the students in the present sample consistently demonstrate the ability to control their anger and do not typically respond to anger-provoking situations by engaging in aggressive or violent behaviors. A conceptualization of anger may explain this finding.

As discussed in Chapter II, Spielberger (1996) proposed that there are two types of anger, trait and state. While trait anger is considered to be a stable, enduring personal characteristic, state anger occurs in response to provocation. Based on this conceptualization of anger, it is likely that prior to Project Peace participation the present sample of students had low levels of trait anger inoculating them from responding to anger-inducing situations in aggressive, furious and rage-like ways. Their consistent anger control as reported on the Personal Anger Scale provides support for the stability of trait anger.

The lack of change in the students' scores on the Personal Anger Scale may also be explained in terms of the cognitive processes involved in anger. Beck (1999) asserted
that 'faulty beliefs' can mobilize an individual to respond to anger in aggressive and assaultive ways particularly when he or she believes that primal beliefs are threatened. The subject matter, activities and tasks involved in Project Peace may not have evoked feelings of threat, fear or loss in the participants. Thus the typical cascading of cognitive processes proposed in Beck's (1999) theory of anger may not have occurred, eliminating the development of 'faulty beliefs' and subsequent assaultive and violent expression of anger.

The findings of the present study support de Anda's (1999) findings: "No measurable change was reported on the Personal Anger Scale" (p. 144). In terms of Spielberger's (1996) conceptualization, this suggests that while Project Peace may be designed to address state anger, the student's in both de Anda's study and those in the present study were likely to have low levels of trait anger. Therefore their responses to anger-provoking situations in the school environment were not likely to occur in the form of aggressive and/or violent behaviors. Additionally, the materials and activities in Project Peace may not have evoked feelings of threat and loss in the participants in both samples of students. Thus, according to Beck (1999) the cognitive processes involved in mediating anger expression were not likely to result in 'faulty beliefs', legitimizing the expression of anger in assaultive ways.

Consistent with past literature (Graham & Hundley, 1994; Hammond & Yung, 1993), the results of the present study and of de Anda's (1999) study indicate that anger in adolescents is not well understood. Future studies examining the exact mechanism and process of anger and anger expression in this age group is needed. The potential for adolescents to express their anger in aggressive ways within the stressful school
environment is likely to exist. Therefore, studies of anger related to school violence need to be conducted to comprehensively address the socio-emotional needs of students and to prevent future school violence incidents.

The present study also sought to examine gender differences with regard to anger expression. It was hypothesized that at posttest time, female and male participants' scores on the Personal Anger Scale would be significantly different (Hypothesis 7A). This hypothesis was supported by the data as females demonstrated greater anger control than males as measured by the Personal Anger Scale. This finding is consistent with past literature indicating that females typically control and internalize their angry feelings while males are more likely to express their anger in an outward fashion (Cox et al., 2000; Farrell & Meyer, 1997; Kopper & Epperson, 1996; Newman et al., 1999; Underwood et al., 1999). A relationship between anger and depression has been found to exist in adult women (Milovchevich et al., 2001; Newman et al., 1999). However, the existence of this relationship in adolescent females has not consistently documented in the literature (Cox et al., 2000). The existence of such a relationship may provide information on gender differences with regard to the expression of emotions particularly in the school environment. Thus continued research in this domain would contribute to the development of effective prevention and intervention strategies related to school violence.

While between groups differences were found, these results should be interpreted with caution as the sample sizes between genders was less than ideal. In addition, the gender differences with regard to anger expression were measured at posttest only. It would have been interesting to examine the changes in anger expression from pretest to
posttest among boys and girls. This would have assisted in determining if participation in Project Peace differentially affected the outcomes on the Personal Anger Scale between the female and male participants. Furthermore, the relationship between anger expression and school violence is not clear demonstrating the need for continued research in this area.

In addition to examining gender differences on the Personal Anger Scale, the present study sought to discover the effects of ethnicity on anger expression. Hypothesis 7B postulated that at posttest time, Asian American, African American and Latino participants’ scores in the Personal Anger Scale would be significantly different from Caucasian participants’ scores. While the results were not significant, examination of the means on the Personal Anger Scale indicates that Caucasians reported the highest scores than all three of the minority groups. Thus for the present sample of students, Caucasian participants demonstrated greater anger control than Asian American, Latino and African American participants. This suggests that differences may exist across ethnic groups with regard to anger expression and anger control.

Similarly, Hypothesis 7C predicted that among ethnic minority participants, African American and Latino participants’ scores on the Personal Anger Scale would be significantly different from Asian American participants’ scores. The results were not significant. However they demonstrated a trend in the predicted direction. Among ethnic minority group participants, Asians reported higher levels of anger control than Latinos and African Americans. These findings are consistent with the literature demonstrating that Asian Americans typically constrain their expression of anger especially in interactions with non-familial individuals (Feng & Cartledge, 1996; Haar & Krahe, 1999;
Tanka-Matumi, 1995). It has also been demonstrated that collectivistic cultures including Japanese, Chinese, Tahitian and Eskimo groups deem the outward expression of anger as inappropriate as it violates social group norms of unity and peacefulness (Haar & Krahe, 1999; Tanka-Matumi, 1995). Thus for the Asian American participants in the present study, it is possible that they are likely to adhere to cultural dictates valuing anger control over anger expression.

While past research (Feng & Cartledge, 1996; Haar & Krahe, 1999; Tanka-Matumi, 1995) has demonstrated that Asian Americans generally avoid the outward expression of anger, Lam (1999) recently found that within the context of parent-child relationships, Chinese parents are likely to engage in outward expressions of anger. Thus, for those of Asian descent, relational contexts may affect anger expression such that anger control is deemed appropriate in social interactions with others outside of the family. While familial interactions and relationships are seen as acceptable places for outward expression of anger to occur (Lam, 1999).

The findings of the present study provide support for Lam’s (1999) findings. The school environment lends itself to social interactions with non-familial individuals calling for anger control and restraint. When compared with their African American and Latino/Hispanic peers, the Asian students in the present sample demonstrated greater anger control demonstrating that these students were likely to employ anger control in their interactions with non-familial peers and adults in the school setting.

While the results of Project Peace are consistent with past research regarding anger expression among Asian Americans, causal inferences about the group differences cannot be made due to the small sample sizes. Additionally, no research currently exists
examining the relationship of anger expression and school violence among Asian American adolescents. The recent increase in violent crimes among Asian American youth in the past decade suggests that members of this minority group may be adhering to the dominant culture’s propensity toward outward anger expression (Center for Disease Control and Prevention/National Center for Health Statistics, 1997). This demonstrates that anger control and anger expression in not well understood among Asian Americans. Continued research is clearly indicated.

As stated above, it was predicted that the Latino and African American participants in the present study would demonstrate significantly different levels of anger control than their Asian American counterparts. While not significant, the results were in the predicted direction. These findings are consistent with past research which has demonstrated that the outward expressions of anger in the form of violence and aggression are considered culturally appropriate among family and group-oriented minority groups including African Americans and Latinos (Cohen, 1999; Escobar-Chaves et al., 2002). Thus, the results suggest that the African American and Latino participants in the present study adhered to traditional cultural dictates supporting the outward expression of anger.

It is of interest to note that in the present sample, Latinos/Hispanics demonstrated the lowest amount of anger control among ethnic minority Project Peace participants. The findings are in contrast to Moisan et al. (1997) who found that African American adolescent boys were more likely to respond to sexual abuse with outward expressions of anger while Latinos are more likely to internalize their anger feelings in the form of depression. Additionally, the present findings do not support those of Deffenbacher &
Swain (1996) who did not find the existence of machismo-related forms of anger among Mexican/Hispanic American adolescents. A possible explanation for the findings of the present study may be that relational context affects anger expression. Therefore, for Hispanic/Latinos, outward anger expression in the school environment is deemed more acceptable than it is for African American youths. Additionally, Armstead and Clark (2002) recently postulated that anger expression may not be a useful construct with African American adolescents. Thus the findings of the present study indicate that anger expression as measured by the Personal Anger Scale does not provide an accurate measure of the expression of anger among African American or Latino/Hispanic adolescents.

The inconsistent and contradictory findings in the literature indicate that anger expression is not well understood among the different minority populations especially when adolescents are considered. Additional research is needed to uncover the exact mechanism of anger among minority populations. Similarly, research is needed to discover the relationship between anger expression and school violence. The disentanglement of culture, ethnicity, socioeconomic status, acculturation and immigration status may be difficult. However examining the effects of these confounding variables will likely lead to a more thorough understanding of anger among minorities and assist researchers in the development of culturally sensitive prevention strategies.

While the results of the present study related to ethnicity and anger expression provide some information to the teachers and administrators of the sample of students in the present study, generalizations to larger minority populations cannot be made. The
results must be interpreted with caution since the sample sizes of minority participants were very small. Additionally, the generalizability of these findings is limited. Many confounding variables were not accounted for including the socioeconomic status, level of acculturation and immigration status. It is likely that cultural dictates, mores and values impact minority group members’ anger expression. However the exact mechanisms involved are not clear.

To summarize, the results of the present study indicate that participation in Project Peace did not significantly alter the students' level of anger control. This sample of New Jersey ninth graders demonstrated consistent control over their angry feelings from pretest to posttest time. Gender differences with regard to anger control emerged with females demonstrating higher levels of anger control when compared to males. While ethnic comparisons on the posttest Personal Anger Scale were not significant, Asian Americans in this sample reported different higher levels of anger control than their African American and Latino peers. Causal inferences about these findings cannot be made with confidence due to the extremely small sample of ethnic participants.

**Attitudes Toward Violence**

Hypothesis 3 was designed to assess the student’s attitudes toward violence. It was hypothesized that participation in Project Peace would increase the participants' scores on the Attitudes Towards Violence Measure; higher scores on this measure indicate more positive attitudes towards nonviolence and the endorsement of nonviolent methods for handling disagreements. This hypothesis was not supported by the data indicating that program participation did not change the adolescents’ attitudes towards violence.
The results of Hypothesis 3 are not consistent with the literature which indicates that prevention and conflict resolution training is likely to teach individuals to use prosocial means of managing interpersonal conflict (Caulfield, 2000; Dishion & Andrews, 1995; Van Schoiack-Edstrom, 2000). Additionally, the present findings are not consistent with those of de Anda (1999). She reported significant improvements on the Attitudes Toward Violence measure indicating that for the students in her study participation in Project Peace resulted in the endorsement of non-violent "means for dealing with situations" (de Anda, 1999, p. 142). For the students the present sample, participation in Project Peace did not alter their attitudes toward violence nor did it affect their use of non-violent methods of conflict resolution in their interactions with others. There are several explanations for these findings.

One reason for the discrepant results of Project Peace on adolescent attitudes toward violence may be attributed to differences in demographic characteristics of de Anda's (1991) sample and the present sample. As noted previously, de Anda (1999) reported significant difficulties with gang membership and gang activity in the school from which her sample was drawn. Past research has demonstrated that negative peers groups such as gangs view violence as a means of self-assertion, which fosters the belief that physical violence is a justifiable means of managing interpersonal conflicts (Elliot, 1994). For the individuals in de Anda's sample, participation in Project Peace may have offered some novel non-violent approaches to conflict to the adolescent participants. Thus, exposure to these strategies during program participation may have lead to changes on the Attitudes Toward Violence Measure from pretest to posttest time.
In the sample of participants from northeast New Jersey, it is possible that the non-violent approaches to conflict taught in Project Peace were similar to the strategies the students were employing in the interpersonal relationships prior to program participation. Therefore, no changes from pretest to posttest time were noted on the Attitudes Toward Violence measure. It seems plausible that the teachings and activities of Project Peace were not sensitive enough to the demographic characteristics of the present sample to affect the participants’ attitudes towards violence.

Another possible explanation for the results in the present study may be related to past exposure to violence. Past research has demonstrated a positive relationship between witnessing violence and future aggressive behaviors (Gray, 1988; Widom, 1990). Similarly, the exposure to violence particularly victimization experiences and violent behavior, have been found to be related to future engagement in violent acts and the endorsement of violence as acceptable means of handling interpersonal conflicts (Richters & Martinez, 1993; Singer et al., 1995). This link between witnessing violence and future aggressive behaviors has been termed “the cycle of violence” (Widom, 1989). Based on this research, the lack of significant difference between pretest and posttest scores on the Attitudes Towards Violence measure in the present study suggests that the participants may not have been exposed to and/or victims of violence in their interpersonal relationships. As such, they reported more positive attitudes towards non-violent conflict resolution strategies and/or prosocial means of handling conflictual situations in their interactions with others.

The findings of the present study may also be a function of social learning. An examination of the items and activities in Project Peace that contribute to the Attitudes
Towards Violence Measure reveals that a substantial amount of interaction between program participants occurred during the intervention. The activities involved generating alternative behaviors, cognitions and thoughts to conflicts in social interactions. The participants were called upon to 'brain-storm' as a collective group to produce responses. Bandura (1995) posited the existence of a social learning phenomenon termed 'social persuasion.' Social persuasion refers to the likelihood that in group interactions, an individual's ideas and attitudes reflect those that the larger group believes to be the socially acceptable response. In the present sample of adolescents, it is possible that the students produced responses on the Attitudes Toward Violence Measure that reflect a group mentality rather than their own individual beliefs and attitudes towards violence and the endorsement of pro-social ways of dealing with interpersonal conflict.

The present study also examined gender differences with regard to attitudes towards violence. It was hypothesized that at posttest time, female and male participants' scores on the Attitudes Toward Violence Measure would be significantly different (Hypothesis 8A). This hypothesis was not supported by the data. There was no difference between females and males regarding their endorsement of violence as an acceptable way of handling interpersonal conflicts. Research has demonstrated that males are more likely to endorse violence as a means of conflict resolution than females (Flannery, 1993; Funk et al., 1999). However, more recent research has demonstrated that girls are beginning to demonstrate a propensity toward engaging in violent behaviors (Ellickson & McGuigan, 2000; NCVS, 2001). The results of the present study support these latter findings indicating that attitudes towards violence among females are beginning to change; girls are beginning to behave in ways consistent with pro-violence
attitudes. Clearly more research is indicated in this domain to uncover the cause for these attitudinal changes. Additionally, the development of intervention and prevention strategies is necessary to ensure the optimal social-emotional development of both adolescent males and females.

In addition to examining gender differences with regard to adolescent attitudes towards violence, the present study sought to examine ethnic differences. Specifically, Hypothesis 8B speculated that at the conclusion of Project Peace, Asian American, African American and Latino participants' scores on the Attitudes Toward Violence Measure would be significantly different from Caucasian participants' scores. No significant differences were found when comparing ethnic majority and ethnic minority groups. Additionally, Hypothesis 8C predicted that among ethnic minority participants, African American and Latino participants' scores on the posttest Attitudes Toward Violence Measure would be significantly different from Asian American participants' scores. No significant differences were found among ethnic minorities with regard to attitudes toward violence.

Although the results were not significant, they indicate that association with an ethnic minority group may not differentially impact one's beliefs about violence as an acceptable means of handling potential conflict. Additionally, it is noteworthy to mention that although mean differences on the Attitudes Toward Violence were not significant, Latino/Hispanic and Asian American participants had nearly identical mean scores on the measure and these mean scores were higher than Caucasian participants. African Americans had the lowest mean scores of all groups. These results suggest that at the conclusion of Project Peace, Asian American and Latino/Hispanic participants had
more positive attitudes toward nonviolence and nonviolent approaches to handling disagreements than their Caucasian peers. While the African Americans' attitudes toward violence and conflict resolution approaches were more pro-violence in nature.

As mentioned in Chapter II, there is a paucity of research examining the effects of ethnicity on adolescents' attitudes toward violence. Funk et al. (1999) found that African Americans endorsed the use of outward, physical responses to anger (verbal altercations and physical fights) in dealing with interpersonal conflicts with other. While European Americans were more likely to endorse more prosocial conflict resolution strategies including mediation. Although their sample of Hispanics was small, Funk et al. (1999) reported that members of this ethnic minority were more likely to view violence as a justifiable means of resolving conflicts.

Additional research has indicated that African Americans and Hispanics are more likely to engage in physical fights in response to conflict (Ellickson & Mc Guigan, 2000). While other research has suggested that African Americans are likely to endorse more violent means of managing interpersonal conflict (Shakoor & Chalmers, 1991) than other minority groups. The reason for endorsement of violence is related to past exposure to violence and victimization. Repeated exposure to violence in interpersonal interactions contributes to the belief that violence is an effective way to achieve status, respect and other social and personal needs (DuRant et al., 1994; Elliot, 1994).

The results of the present study provide some support for Funk et al.'s (1999) findings as African Americans were found to endorse more violent conflict resolution strategies than Caucasians. However, the present results regarding attitudes towards violence among Hispanic/Latinos were not consistent with past research. As stated
previously, Latinos/Hispanics in the present sample of adolescents were found to endorse more prosocial means of managing conflicts and that their attitudes towards violence were similar to their Asian peers. This suggests that attitudes towards violence among ethnic minority adolescents are not well understood. Additional research designed to be culturally sensitive would provide for a more thorough understanding of the factors contributing to minority individuals' view of violence. It is likely that socio-economic status, levels of acculturation and demographic characteristics affect minority individuals' attitudes towards violence.

A review of the literature by this researcher did not uncover any studies that specifically examine attitudes towards violence among Asian American adolescents and research specifically examining attitudes toward violence as it relates to school violence has yet to be conducted. Additionally, there appears to be a disproportionate amount of research examining African Americans (Du Rant et al., 1994; Funk et al., 1994; Ellickson & Mc Guigan, 2000; Shakoor & Chalmers, 1991) and few studies examining Hispanic/Latinos in this age group (Funk et al., 1994; Ellickson & Mc Guigan, 2000). The majority of existing studies utilized samples of inner-city youth indicating that confounding variables such as socioeconomic status and urban living are likely to affect one's attitudes toward violence. Thus, the results of the present study may be a function of demographic variables. While past research that examined adolescent attitudes toward violence with urban youth (Du Rant et al., 1994; Funk et al., 1994; Ellickson & Mc Guigan, 2000; Shakoor & Chalmers, 1991), the present sample was comprised on students living in a suburban locale.
Another possible explanation for the results of the present study may be a function of lack of empirical support validating consistent ethnic differences with regard to adolescent attitudes towards violence. The paucity of research examining this topic has yet to lead to firm conclusions about the exact mechanisms at work that contribute to adolescents' attitudes and beliefs about the acceptability of violence as a means of settling interpersonal disputes. Similarly, the relationship between school violence and attitudes towards violence has not been systematically examined. With little research to support ethnic differences with regard to adolescent attitudes towards violence the reason for the present outcomes on the Attitudes Toward Violence Measure of Project Peace are difficult to explain. The results of the present study suggest that there may be some differences among minority students with regard to the endorsement of violence as an acceptable conflict resolution strategy. However, the small sample of ethnic minority participants does not allow for generalizability to larger populations of ethnic minority adolescents nor do the results allow for causal inferences to be made about the impact of ethnic identity on attitudes toward violence.

Conflict Resolution Skills

The fifth hypothesis stated that there would be a statistically significant decrease in the students' scores on the Occurrence of Violent Behavior items of the Monthly Behavior Report. The data supported this hypothesis indicating that the Project Peace participants in this study reported a decrease in their participation in, or witnessing of violent behaviors during program participation. These findings suggest that the students may have learned some additional prosocial conflict resolution skills during the course of Project Peace and were able to utilize these skills in dealing with interpersonal conflicts.
These findings are consistent with de Anda’s (1999) original study and provide support for the use of the activities and teachings of Project Peace that contribute to the Monthly Behavior Report outcomes. The respondents in the present study supplied anecdotal remarks supporting their acquisition of conflict resolution skills. The students indicated an increase in other students settling interpersonal conflicts and confrontations via walking away to “cool off,” seeking out a mediator, and talking things through. The students also reported their own use of such conflict management techniques: “I just walk away when guys wanna fight me” and “I think about my issues with people is a good way to deal with conflict.” Such statements provide additional support for the effectiveness of some of the teachings and activities of Project Peace.

A cognitive behavioral framework was used to design the activities of Project Peace. Examination of some of the key features of this theoretical model provides an explanation for the positive outcomes on the Monthly Behavior Report. According to Bandura (1995), improving a student’s self-efficacy or the belief that he or she can “organize and execute courses of action required to manage prospective situations” (p. 2) will result in positive behavioral changes. As discussed in Chapter II, one of the theoretical frameworks of Project Peace was developed on was Bandura’s concept of self-efficacy. Two key features of self-efficacy that were included in the activities that contributed to the Monthly Behavior Report were: 1) mastery experiences—allowing the students to practice the skills learned in the classroom in everyday life situations, and 2) vicarious experiences—learning through effective peer-modeling of prosocial activities in controlled settings to demonstrate their effectiveness. The outcomes of the Monthly Behavior Report in the present study indicate that this approach is useful in teaching
prosocial techniques for managing conflicts to adolescents in a northeast New Jersey High School. In addition, de Anda (1999) suggested that the Monthly Behavior Report be evaluated on an item-by-item basis to provide more in depth information regarding the occurrence and frequency of certain violent as well as non-violent behaviors. This will enable more meaningful data to be gained and utilized in addressing the specific needs of the student population examined in the current study.

The outcomes of the Monthly Behavior Report in the present sample is consistent with past research demonstrating the effectiveness of conflict resolution training on increasing students’ use of prosocial methods for managing conflicts (de Anda, 1999; Grossman et al., 1997; Sylvester & Frey, 1994; Van Schoiack-Edstrom, 2002). Similarly, the results provide some support for the efficacy of Project Peace teachings with a sample of suburban New Jersey ninth graders. However, as stated in Chapter II, the effectiveness of conflict-resolution programs as a means of addressing violence in the schools has revealed mixed results. While some evidence (Aber et al., 1996; Rixon & Erwin, 1999; Skiba & Peterson, 1999) has demonstrated a relationship between conflict-resolution skills and violence prevention skills, the exact relationship is unknown. The findings of the present study suggest that exposure to conflict resolution training may provide adolescents with skills useful in interpersonal interactions. However, firm conclusions about the relationship to violence prevention cannot be made.

One of the aims of the present research was to examine the effects of demographic characteristics on the outcomes of Project Peace measures. More specifically, Hypothesis 10A predicted that at program completion time, female and males would score significantly different on the Occurrence on Nonviolent Behavior
items of the Monthly Behavior Report. The results do not support this hypothesis indicating that at posttest time, males and females reported using similar amounts of nonviolent conflict resolution approaches in their interactions with others.

Few studies currently exist that examine the differential effect conflict resolution training has on male and female adolescents. One study, Lindeman et al. (1997) found that aggressive means of handling interpersonal conflicts developed in a curvilinear manner such that mid-adolescents (ages 14 to 16) are more likely to use aggressive strategies in dealing with conflictual situations and, males and females in this age group are equally as likely to utilize aggressive conflict resolution strategies. The results of the present study partially support these findings. Males and females were not found to differ in the tactics they used to deal with conflicts. However, they reported using more pro-social conflict resolution strategies. These findings are not consistent with Lindeman et al.'s (1997) research. The mixed results obtained in the present study and the paucity of research examining gender differences with regard to the effectiveness of conflict resolution across gender groups indicates the need for continued studies to be conducted in this domain.

The present study was also interested in examining the effectiveness of conflict resolution training across ethnic groups. As such, Hypothesis 10 B speculated that Caucasian and Asian American participants' scores on the Occurrence of Nonviolent Behavior items of the Monthly Behavior Report would be significantly different from Latino and African American participants' scores. While the results were not significant, the results were consistent with the stated hypothesis.
A review of the literature by the present researcher did not reveal the existence of a study comparing the outcomes and effectiveness of conflict resolution training across ethnic groups. Past research has indicated that Asian Americans typically adhere to a collectivist viewpoint thus supporting the use conflict-avoidance strategies in interpersonal interactions (Obuchi & Takahshi, 1994). African American and Latino/Hispanic cultures function according to a “culture of honor” thus, are more likely to engage in more aggressive or physical means of handling interpersonal conflict (Cartledge & Millburn, 1996). Additionally, some research has demonstrated the effectiveness of conflict resolution training by teaching students skills to avoid violent behavior by using nonviolent conflict management skills (Lindeman et al., 1997; Weissberg & Greenberg, 1997). Taken together, these studies indicate that it appears likely that there are cultural influences impacting individuals’ use of conflict resolution strategies.

The present findings provide further support that these differences may exist. Asian Americans, Latinos and African Americans may employ different conflict resolution strategies in their interpersonal interactions. Causal inferences about the reasons for these findings cannot be made with confidence due to the extremely small numbers of ethnic minority participants in the current study. Additionally, it is likely that confounding variables including socioeconomic status and living environments impacts the type of conflict resolution strategies one employs. Studies examining the impact of culture and ethnicity on adolescent conflict management style are clearly warranted. Future research examining the relationship between conflict resolution training and school violence prevention is also needed.
Skills and Knowledge Acquisition

The fourth hypothesis stated that there would be a significant increase in the students' scores on the Skills and Knowledge Measure from pretest to posttest. The hypothesis speculated that the participants would have assimilated a significant amount of the knowledge and skills presented to them during Project Peace into their cognitive and behavioral repertoires. The data did not support this hypothesis indicating that the students in this sample did not gain significant amounts of information related to all of the topics covered in Project Peace. There are several explanations for this finding.

The Skills and Knowledge Measure was designed to assess the students' "assimilation of curriculum content" (de Anda, 1999, p. 8) by testing their knowledge of the major concepts and information presented to them during the Project Peace. The questions in this measure tap the students' knowledge of curricular content and are based on the information presented to them in the activities, skills and lessons addressing issues related to the school climate, attitudes towards violence, anger and aggression, and methods for conflict resolution. When the overall mixed results of the present study are considered, one would expect that this hypothesis would not be supported; the participants' scores on the Skills and Knowledge Measure would not be expected to change significantly from pretest to posttest.

Another reason for the lack of significant changes in the students' scores on the Skills and Knowledge Measure from pretest to posttest can also be conceptualized in a Piagetian framework. As discussed in Chapter II, this measure hinges on Piaget's process of assimilation—the integration of external elements into an individual's internal structure or 'schema.' It is possible that the adolescent sample examined in the present
study has yet to develop schemas for violence, violence prevention, and/or conflict resolution skills. Additional time and reinforcement of program materials may be needed to produce the desired change in attitudes, and beliefs, and for the internalization of teachings of Project Peace. Similarly, participation in more long-term violence prevention/conflict-resolution may allow for more skills and knowledge acquisition. These findings are consistent with past research which has demonstrated that long-term assimilation of violence prevention/conflict resolution training “require practice and refinement before they can be consistently effective in resolving conflicts and responding to violence” (Bosworth et al., 1998, p. 785).

Another explanation for the present findings may be that the students who participated in Project Peace may already have possessed some of the skills and knowledge presented to them during the program. The slight increase in scores on the Skills and Knowledge Measure from pretest to posttest (19.93 or 76.56% to 20.07 or 77.19%) suggests that this sample of students had a base of skills and knowledge related to the information presented in Project Peace. Additionally, the adolescents in this sample appear to have previously developed adequate anger management skills (as made evident by their stable scores on the Personal Anger Scale) prior to participating in Project Peace. However, they may have learned some additional skills and methods for managing conflicts as demonstrated by the outcomes of the Monthly Behavior Report.

The results of the present study do not support de Anda’s (1999) findings. de Anda (1999) reported a significant increase in scores on the Skills in Knowledge Measure from pre-test (M = 17.51) to posttest (M = 19.82), t = -6.50, p < .0001. A possible explanation for the lack of consistent outcomes in the present study may be due to the
demographic differences in the samples of students examined. The original group of student’s who participated in Project Peace ranged in age from 14 to 18 and were enrolled in grades 9 through 12; the present sample of students ranged in age from 14 to 16 and all were enrolled in the ninth grade. It is possible that developmental differences, including identity formation, in the samples could account for the differences in the outcomes of the Skills and Knowledge Measure. Additionally, the original sample of students was from an ethnically diverse, urban high school and the present sample was drawn from a relatively homogenous population in small, northeast, suburban locale. It is likely that confounding variables including socioeconomic status and lifestyle differences impacted the students’ response to Project Peace in general, and responses on the Skills and Knowledge Measure, more specifically.

While de Anda (1999) reported outcomes on the Skills and Knowledge Measure with her sample of ethnically diverse, inner city adolescents, the results of the present sample does not support her findings. However, the outcomes secured in this study provide empirical information about Project Peace where it is lacking. Based on the results of the Skills and Knowledge Measure, Project Peace does not appear to be an effective violence prevention program for a sample of ethnically homogeneous ninth graders from northeast New Jersey. The short-term nature of this program may explain the less than desirable outcomes.

Past research has examined the effectiveness of violence prevention programs that were more long-term in nature. Sylvester and Frey (1992) reported the effectiveness of Second Step in reducing aggressive and impulsive behaviors in the school setting, and increasing students’ social competence. Participants in Second Step demonstrated gains
in program knowledge, pre-test to posttest scores increased from 45 to 52 percent. This program included 30, 35-minute classroom-based lessons conducted several times per week. Similarly, Van Schoiack-Edstrom and colleagues (2002) reported the success of Second Step when the curriculum was expanded to a two-year program. Year 2 students were less likely to endorse a variety of aggressive behaviors: Physical Aggression, \( t (291) = -4.29, p < .001 \); Verbal Derogation, \( t (289) = -5.07, p = .001 \); and Social Exclusion, \( t (292) = -6.29, p < .001 \). The RCCP violence prevention/conflict-resolution has also been shown to be effective (Aber et al., 1996, 1998) in reducing hostile attributional biases and subsequent violent behaviors. Positive effects of RCCP were found when a large number (10 or more) lessons per week were provided to the students, \( F (6, 2056) = 2.911, p < .006; \eta^2 = .004 \).

Since Project Peace represents a comparatively short program (11 total sessions), it is likely that more long-term violence prevention/conflict-resolution training is needed to produced attitudinal and behavioral changes in the present sample of adolescents. These findings are consistent with past research which has demonstrated that programs designed to teach conflict resolution and violence prevention skills are likely to be more effective when they are long-term and provide students with the opportunity assimilate and practice the skills and knowledge learned during program participation (Bosworth et al., 1998).

The outcomes of the Skills and Knowledge Measure were also examined to discover the effects of demographic characteristics on the students' assimilation of Project Peace materials. More specifically, Hypothesis 9A speculated that there would be significant differences between female and male participants' scores on the Skills and
Knowledge Measure at posttest time. This hypothesis was supported by the data. At posttest time, females had higher mean scores on the Skills and Knowledge Measure than males suggesting that female participants in this sample assimilated more skills and knowledge from Project Peace than male participants.

As mentioned in Chapter II, the research is mixed regarding the whether or not violence prevention programs have differential effects on males and females. Some studies of violence prevention programs suggest that they may be effective for boys, but not for girls (Farrell & Meyer, 1997; Leff et al, 2001). It has also been suggested that violence prevention programs may serve as a ‘buffer’ against the developmental trajectories of aggression for boys (Farrell & Meyer, 1997), thus making males more likely to extract knowledge and skills from violence prevention and intervention programs (Leff, 2001). Although other studies suggest that there is no difference in intervention outcomes between gender groups (Aber et al., 1998; Loeber & Stouthamer-Loeber, 1998), the present study found that girls extracted more skills and knowledge from Project Peace than boys. A review of the literature has not demonstrated gender differences in this direction.

The unequal sample sizes of males and females in this study may provide one explanation for the gender differences at posttest time on the Skills and Knowledge Measure. As mentioned earlier, there were a total of 65 male participants and 85 female participants. Since there was a less than ideal ratio of males to females, a more conservative $t$ test (equal variances was not assumed) was used. The unequal sample sizes may have contributed to the present findings indicating that female participants extracted more skills and knowledge from Project Peace than male participants. This less
robust statistical test limits the generalizability of these findings to larger populations. While causation of these differences cannot be outlined with confidence, speculation about possible gender differences contributing to these findings is of interest.

The gender differences found in the present study may be the results of changing behaviors and attitudes among female adolescents. It was mentioned previously that girls are beginning to demonstrate a propensity toward engaging in violent behaviors (Ellickson & McGuigan, 2000; NCVS, 2001). This suggests that adolescent girls may be more sensitive to conflict resolution and violence prevention training than initially thought. Continued research examining the effectiveness of prevention training is clearly needed to uncover the different socio-emotional needs of adolescent females and males with regard to violence and prevention programs.

The present results may also be explained in a developmental context. Lindeman and colleagues (1997) found that the use of aggression, prosociality and withdrawal as reactions to interpersonal conflict situations varies as a function of age and gender. The researcher's reported that females in mid-adolescence (age 14) are more likely to utilize aggressive means of handling interpersonal conflict than early- (age 11) and late-adolescent (age 17) females. Accordingly, the female participants in this study may have be experiencing developmental changes that affected their attitudes toward violence, feelings about the school climate and attitudes about effective conflict resolution strategies. Thus, presentation of violence prevention and conflict resolution strategies to girls at this age may prove effective in providing prosocial means of dealing with interpersonal disputes.
While significant gender differences were found on the Skills and Knowledge Measure at posttest time, it would have been interesting to examine changes from pre-test to posttest time across gender groups. This may have provided more important information regarding gender differences on the outcomes of this measure.

The present study was also interested in examining ethnic differences with regard to the skills and knowledge gained from Project Peace participation. It was hypothesized that Asian American, African American and Latino participants’ scores would be significantly different than Caucasian participants’ scores on the posttest Skills and Knowledge Measure (Hypothesis 9B). Similarly, Hypothesis 9 C speculated that among ethnic minority participants, African American and Latino participants’ scores would be significantly different from Asian American participants’ scores on the posttest Skills and Knowledge Measure. The results were not significant for either hypothesis. This suggests that affiliation with an ethnic group did not differentially affect the amount of information extracted from Project Peace participation. While the results were not significant, it is of interest to examine the possible reasons for the outcomes secured in the present study.

In the present study, it was speculated that students who identified themselves as belonging to an ethnic minority group (African American, Latino or Asian American) would report significantly different scores on the Skills and Knowledge Measure of Project Peace at posttest time when compared to Caucasian participants’ scores. Recent preliminary research has demonstrated that violence prevention programs are likely to demonstrate the greatest impact on minority populations as they offer members of these groups a means of understanding the social norms and values of the majority populations
(Domitrovich & Greenberg, 2000; Farrell & Meyer, 1997; Leff et al., 2001). However, in the present sample of adolescents, Asian Americans and Latinos reported almost identical scores on the posttest Skills and Knowledge Measure as Caucasian participants; African Americans scored slightly lower than all three of these groups. It is likely that additional confounding variables including level of acculturation, ethnic identity development and immigration status had an effect on the outcomes of the Skills and Knowledge Measure. Without knowledge of these demographic variables, firm conclusions about the reasons for the outcomes of the present study cannot be made with confidence.

It has been consistently stated throughout the present body of literature that the differential effects of prevention/conflict resolution programs with ethnically diverse samples of students has yet to be conducted. Investigations of ethnic differences and socioeconomic diversity in the adolescent population are just beginning to emerge (McLoyd & Steinberg, 1999; Steinberg & Morris, 2001). Clearly, additional research is needed examining the effectiveness of violence prevention programs with culturally different students. The present study suggests that little to no differences exist with regard to the amount of skills and knowledge extracted from Project Peace among a sample of northeast New Jersey ninth graders. It appears as though all students demonstrated moderate gains in skills and knowledge related to the information presented in Project Peace including the school climate, attitudes toward violence, anger control and conflict resolution skills. However, the extremely small sample sizes of ethnic minority students' makes generalizability of these findings impossible to do.

While de Anda's (1999) results provide support for the efficacy of Project Peace as measured by the Skills and Knowledge Measure, the present results do not. As
mentioned in the limitations section in Chapter II, follow-up studies examining the long-
term effects of Project Peace have not been conducted to date. Therefore, the findings of
the present study indicate that the sample of northeast New Jersey ninth graders did not
gain short-term skills and knowledge from participation in Project Peace. Based on the
results of the present study, the administrators and teachers of Roxbury High School may
seek to implement a violence prevention program that is more suitable for this population
of adolescents.

Summary and Clinical Implications

The findings of the present study were mixed, indicating that Project Peace may
not be suitable for providing violence prevention and conflict resolution strategies to
adolescents in northeast New Jersey. de Anda (1999) concluded that

the findings demonstrate the effectiveness of the Project Peace curriculum in
producing positive, prosocial changes in attitudes toward violence, in increasing
the sense of safety and security within the school environment, and in reducing
the incidence of violent confrontations on campus. (p. 145)

However, the same statement cannot be made with regard to the present sample. The
results obtained in the present study must be interpreted with caution.

Although the generalizability of the present findings cannot be done with
confidence, the results of this study may offer the administrators and teachers in the New
Jersey High School with some important information regarding the needs of their student
population. The School Climate Measure may indicate some areas of the school
environment that need to be addressed to assist the administrators develop programs and
institute methods for creating a school environment that produces feelings and safety and
security among students and teachers alike. Additionally, further analysis of the students’ attitudes towards violence may offer some insight into the types of programs and interventions that would be useful with this population of students to assist them in developing prosocial ways of interacting with their peers. Based on the outcomes of Project Peace, this school would benefit from further evaluation of violence prevention/conflict resolution programs that would best serve their student body.

The present study was interested in examining gender and ethnic differences on the outcomes of the Project Peace measures. Significant gender differences were found with regard to anger expression/control and skills and knowledge acquisition. Ethnic differences were not significant across all of the Project Peace measures. However, trends were detected across all domains examined including the school climate, attitudes toward violence, anger, skills and knowledge acquisition and conflict resolution strategies. Clearly culture and gender-sensitive research is needed to examine the differential effects violence prevention training offers these groups if the issue of school violence is to be adequately addressed.

The information presented throughout the course of the present research demonstrates the pervasiveness of violence in the schools across the United States. The psycho-social impact of the effects of these violent acts on adolescents cannot be refuted. Thus, psychologists functioning in school settings could assist administrators and teachers to evaluate and implement prevention programs as a means of safeguarding both the physical and emotional well-being of the students. Additionally, mental health practitioners should be available and trained to assist students cope with feelings that may
occur secondary to any incidences of school violence, whether they occur at their own school or elsewhere.

To summarize, the present study contributed to the current body of literature on school violence providing empirical data for de Anda’s (1999) Project Peace. The demographic variables of gender and ethnicity were examined across the measures of Project Peace and suggest that between group differences may exist with regard to the school climate, attitudes toward violence, anger expression, skills and knowledge acquisition and conflict resolution strategies. The outcomes clearly indicate the need for continued research with regard to school violence.

Recommendations for Future Research

School-based violence prevention and conflict resolution programs are intuitively appealing and politically expedient. However, they are not necessarily effective at affecting violent behavior, especially when coupled with counterproductive disciplinary practices that serve to punish, segregate and alienate those students already at risk of engaging in undesirable behavior (metal detectors in urban areas and zero tolerance policies). At the very foundation of safe schools, is the community. Without community involvement in and support for peaceful academic climates, schools will continue to struggle against an increasing amount of student-perpetrated violence.

Current research involving parents in school violence prevention programs is beginning to demonstrate the effectiveness of a multi-pronged approach to preventing school violence. For example, Cameron (2002) recently examined parents’ perceptions of the factors contributing to school violence among students who have been suspended for committing violent acts on school grounds. The results suggest that parental
involvement in school programs including violence prevention and conflict resolution training are likely to lead to more efficacious outcomes resulting in fewer incidents of violent crimes on school campuses. The exact relationship between parental perceptions of school violence and parental involvement in violence prevention programming is far from being understood. Thus future research in this domain is clearly needed.

Similarly, research examining the effectiveness of community-wide involvement in school violence prevention programs is beginning to surface in the current body of literature. For example, Osofsky and Osofsky (2001) reviewed a number of programs currently underway in Louisiana to determine the effectiveness of combining school violence prevention programs with community-based programs. One such program, The Violence Intervention Program, aims to decrease violence through a combination of early intervention, counseling, and services to victims as well as education and prevention programs designed for police, parents, school and children. It is based on the idea that involving multiple community agencies and individuals in violence prevention programs will allow for a greater likelihood of a decrease in school violence prevention. Evaluations examining the efficacy of this and other programs are currently underway. It seems likely that the results will reveal important information about school violence prevention and provide a springboard for researchers, program designers and policy makers in examining additional factors that need to be studied in order to comprehensively address the issue of violence on school grounds.

Title IV of the No Child Left Behind Act of 2001 (P. L. 107-110) requires that schools will be legally responsible for instituting and validating the effectiveness of violence prevention programs. Thus, continuing research needs to be focused on
securing empirical data to support the use of school intervention and prevention strategies. This will allow for the development of effective school violence prevention programs. Gender- and ethnic-sensitive studies are needed to comprehensively address the socio-emotional needs of adolescents when the issue of school violence is considered. Likewise, ethnic/cultural research highlighting the issues of levels of acculturation, socio-economic status and demographic characteristics/features of minority populations will likely contribute a comprehensive understanding of the factors involved in school violence and assist in effective prevention program development. Continued research examining the causes of school violence needs to be conducted to provide for the safe education of our nation's youth.
References


Arndt, R. (November 7, 1994). *School violence on rise, survey says.* Nation’s Cities


the Senate Committee on Commerce, Washington, D. C.


Consulting and Clinical Psychology, 64 (4), 538-548.


control training for institutionalized psychiatric male adolescents. *Behavior Therapy, 17*, 109-123.


Hall, G. S. (1904). *Adolescence: Its psychology and its relations to physiology,*


Inhelder, B., & Piaget, J. (1958). The growth of logical thinking from childhood to


*Social psychology readings: A century of research* (pp.119-123), New York:

McGraw-Hill. (Reprinted from *The principles of psychology* (2 vols.), by W.

James, 1890, New York: Holt.


Research, 1* (2), 9-23.


resolution*. Alexandria, VA: Association for Supervision and Curriculum

Development.

Kachur, S. P., Stennies, G. M., Powell, K. E., Modzelski, W., Stephens, R., Murphy, R.,
adolescents’ relationships with their peers and their family. In S. Jackson, & H
Rodriguez-Tome (Eds.) *Adolescence and its social worlds* (pp. 145-167).


and implications for treatment. In K. S. Dobson & P. C. Kendall (Eds.), *Psycho-


Kopper, B. A. (1993). Role of gender, sex role identity, and type A behavior in anger


Washington, DC: Congressional Information Service.


Richters, J. E., & Martinez, P. (1993). The NIMH community violence project:


38-47.


Violence in American Schools (pp. 253-289). New York: Cambridge University Press.


Appendix A

Permission Letter from Roxbury High School
April 24, 2002

Ms. Sophia L. Savino
149 Milton Place
South Orange, NJ 07079

Dear Ms. Savino:

I am writing you this letter to grant you permission to utilize the data we collected during our Health Class during the 2000-2001 academic year. This data includes demographic information and pre- and post-tests from the Project Peace Program that we instituted for the 2000-2001 school year. All freshmen were required to participate in this program as part of their grade 9 health curriculum. The goal of the program was to develop skills in and change attitudes about conflict resolution and violence prevention. Parental consent was not needed for students to participate in Project Peace as it was a mandatory part of the ninth grade curriculum that has been aligned to meet New Jersey State Core Content Standards.

We understand that you will be using the data and its results as a part of your dissertation through Seton Hall University, and that you anticipate completing your research by May 2004. The data remains the property of Roxbury High School and information shared must be returned to Roxbury High School or destroyed with my authorization. Our school will need to receive your results and findings including data lists and summaries. Your information will serve as a way of addressing the current socio-emotional needs of our students, and will be meaningful to our evaluation and future curriculum development.

Should you have any questions or concerns regarding this issue, please feel free to contact me at the above address or at 973.584.1200 ext. 241. We look forward to working with you as you complete your Doctoral Dissertation. Thank you.

Sincerely,

Jane Webber Runte
Director,
Student Personnel Services
Roxbury High School
Appendix B

The School Climate Measure
## SCHOOL CLIMATE MEASURE

<table>
<thead>
<tr>
<th></th>
<th>Most of the Time</th>
<th>Often</th>
<th>About Half of the Time</th>
<th>Not Very Often</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel safe when I am at school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. I feel that it is safe to go into the bathrooms at school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. I feel that it is safe to be on the school grounds after school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. I feel safe when I am in the halls between classes, at nutrition, and at lunch.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. I feel safe at school activities like dances and sports.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. When I am at school I feel that I have to keep checking everyone and everything to make sure I am safe.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>7. I feel threatened by some of the other students.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8. Other students threaten to hurt me.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9. Other students push me around.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10. I worry about getting hurt at school because students carry weapons on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>11. School security and school police make me feel safer on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>12. I feel worried about my safety when I am leaving or arriving on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>13. I feel that I can handle situations that might put me in danger at school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>14. I feel that teachers or administrators could handle a situation that might put me in danger at school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>15. I feel that school security and school police could handle a situation that might put me in danger at school.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>16. I feel that I need to hang with a group for safety reasons.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>17. I feel there are adults at school I would talk to if I knew there was going to be trouble on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>18. I feel that I know how to calm things down when there is a problem between me and another student (or students) on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>19. I feel that students try to keep peace on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>20. I feel threatened by the presence of gang members on campus.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Score** ______________
<table>
<thead>
<tr>
<th></th>
<th>Most of the Time</th>
<th>Often</th>
<th>About Half of the Time</th>
<th>Not Very Often</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

21. I ignore situations and other students who try to get me angry or get me into a fight.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

22. When I get angry, I can walk away for a while and cool off.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

23. When someone makes me angry, I yell and cuss at him or her.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

24. When someone makes me angry, I end up getting into a fight with him or her.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

25. I hit or threaten other students if I think they deserve it.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

26. I get angry or upset with other people, but I settle it by talking it out.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

27. When other students say or do things to make me angry, I just walk away.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

28. When I get angry at another student, I call in my friends to back me up.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

29. When I get into an argument with another student, I can back off and let it go.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

30. When I have a problem with another student, I settle it by using a mediator.

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Score**
Appendix C

The Attitude towards Violence Measure
## ATTITUDES TOWARD VIOLENCE MEASURE

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

1. If someone disses me, I have a right to fight.  
4 3 2 1

2. The only way to protect myself is to hang with others.  
4 3 2 1

3. Talking about a problem with a neutral person can help solve some problems.  
4 3 2 1

4. If I walk away from a fight, I will lose respect.  
4 3 2 1

5. Talking about a problem can’t really solve it.  
4 3 2 1

6. Weapons on campus make it more dangerous for everyone.  
4 3 2 1

7. If I give in a little to what the other person wants, it shows that I am a weak person.  
4 3 2 1

8. I think that it is important to be in a gang.  
4 3 2 1

9. The school would be a better place if there were no such thing as gangs.  
4 3 2 1

10. There are other ways to settle a problem than by fighting.  
4 3 2 1

11. Once someone gets angry, it is too late to solve the problem by talking it out.  
4 3 2 1

12. If someone disses me, I have a right to use a weapon.  
4 3 2 1

13. The only way to protect myself on campus is to carry a weapon.  
4 3 2 1

14. I wish there were no gangs in my neighborhood.  
4 3 2 1

15. It is important for me to maintain my reputation no matter what it takes.  
4 3 2 1

16. To solve a problem, everyone involved has to give a little to also get what they want.  
4 3 2 1

17. People who come from different backgrounds, neighborhoods, or cultures will never get along.  
4 3 2 1

18. I like the way gangs take care of problems.  
4 3 2 1

19. If someone does something to me, my family, or my friends, I have to take revenge.  
4 3 2 1

20. What other people say about me doesn’t affect who I really am.  
4 3 2 1

Total Score __________

© 1995 by Diane de Anda • It is unlawful to reproduce this page.  
Available from Castalia Publishing Co. • Eugene, OR
Appendix D

The Skills and Knowledge Measure
SKILLS AND KNOWLEDGE MEASURE

1. Teenagers are victims of violence more often than other age groups.
2. When we are angry or upset, our body goes through physical changes.
3. Some things make us angry or upset because we have developed a habit of responding that way.
4. Our first and automatic response to a situation is always the best response.
5. The United States has a lower rate of homicide by handguns than most countries.
6. Tightening our muscles for long periods of time when we are angry or upset can lead to headaches, a stiff jaw, and other types of physical problems.
7. The way we think about something determines how we feel about it.
8. Our reactions to things are automatic and cannot be changed.
9. Relaxation is one way to reduce our muscle tension when we are upset.
10. Changing the way we think about something can change the way we feel about it.
11. When we are angry, we have no choice about how we act.
12. Some of the actions we take when we are angry can make us feel better for a short time but make things worse later.
13. When we are angry or upset, we can't stop and think about the consequences of what we do.
14. Guns have added to the problem of violence in the United States.

1. When we are angry or upset, our muscles become:
   a. weak
   b. shaky
   c. painful
   d. tense and tight

2. Examples of INTERNAL causes of violence are:
   a. someone yelling and cursing another person
   b. feelings, thoughts, and beliefs
   c. tagging
   d. shoving and pushing during an argument

3. The things that set us off and make us feel angry or upset are called:
   a. problems
   b. worries
   c. habits
   d. triggers

4. We can decide which is the best action to take when we are angry or upset by:
   a. flipping a coin
   b. following our feelings
   c. figuring out what the consequences or results of our actions will be
   d. asking our friends
5. If we try to hold in and hide our anger for a long time:
   a. the feelings of anger will go away
   b. we will forget why we were angry
   c. we may suddenly “blow up” and let it all out
   d. we will learn to be patient

6. We can learn to stop reacting in an automatic way to something that makes us angry or upset by:
   a. just deciding to stop
   b. practicing a different way of reacting over and over until it becomes automatic
   c. avoiding the situation
   d. there’s no way — we can’t change an automatic reaction

7. Our feelings are controlled by:
   a. our thoughts
   b. what people say and do to us
   c. what is happening around us
   d. other people’s attitudes toward us

8. Before we react to something that upsets us, we should make sure that our understanding of __________ is correct.
   a. the time and place
   b. the facts and meaning
   c. the people and things
   d. what’s right and wrong

9. I can change the way I react in different situations by changing my:
   a. socks
   b. friends
   c. reputation
   d. thoughts and feelings

10. If my friend passes me in the hall without saying anything to me, it means:
    a. he/she is mad at me
    b. he/she didn’t see me
    c. he/she doesn’t care about me anymore
    d. it could be one of the above reasons or something else — I need to check with him/her

11. One of the first things we should do when we feel ourselves getting angry or upset is to:
    a. yell and let out our feelings
    b. take a break for a few minutes and relax our tense muscles
    c. call our friends for support
    d. get away from everyone

Total Score __________
Appendix E

The Monthly Behavior Report
### MONTHLY BEHAVIOR REPORT

<table>
<thead>
<tr>
<th>Almost Every Day</th>
<th>Many Times a Month</th>
<th>A Few Times a Month</th>
<th>Once or Twice a Month</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

1. A student threatened to injure another student.
   - 5
   - 4
   - 3
   - 2
   - 1

2. A student hit another student, but no one was injured.
   - 5
   - 4
   - 3
   - 2
   - 1

3. A student hit another student and caused injury (broke a bone, caused bleeding, injured head, etc.).
   - 5
   - 4
   - 3
   - 2
   - 1

4. Two students got into a fight.
   - 5
   - 4
   - 3
   - 2
   - 1

5. One or more groups of students got into a fight.
   - 5
   - 4
   - 3
   - 2
   - 1

6. Students yelled, cussed, or dissed each other but didn’t hit or physically injure each other.
   - 5
   - 4
   - 3
   - 2
   - 1

7. Students started to argue but cooled off and settled the problem without fighting.
   - 5
   - 4
   - 3
   - 2
   - 1

8. A student brought a weapon onto campus.
   - 5
   - 4
   - 3
   - 2
   - 1

9. Students settled a problem by using a mediator.
   - 5
   - 4
   - 3
   - 2
   - 1

10. I got into a physical fight with another student.
    - 5
    - 4
    - 3
    - 2
    - 1

11. I got angry at another student and we dissed, cussed, or yelled at each other.
    - 5
    - 4
    - 3
    - 2
    - 1

12. I got angry at someone but settled it by talking it out.
    - 5
    - 4
    - 3
    - 2
    - 1

13. I got angry at another student, but I ignored it and acted as though it didn’t happen.
    - 5
    - 4
    - 3
    - 2
    - 1

14. I got angry at another student but just walked away.
    - 5
    - 4
    - 3
    - 2
    - 1

15. I got angry at another student and settled it by using a mediator.
    - 5
    - 4
    - 3
    - 2
    - 1

16. I got angry at another student and called in my friends to back me up.
    - 5
    - 4
    - 3
    - 2
    - 1

17. I was threatened by another student.
    - 5
    - 4
    - 3
    - 2
    - 1

18. I was injured by another student.
    - 5
    - 4
    - 3
    - 2
    - 1

19. Students were able to talk other students out of getting into a fight.
    - 5
    - 4
    - 3
    - 2
    - 1

20. Students encouraged other students to fight with each other.
    - 5
    - 4
    - 3
    - 2
    - 1

**Total Score** __________