EXAMINING THE INFLUENCE OF SCHOOL CONNECTEDNESS ON

INTERPESONAL YOUTH VIOLENCE PREVENTION

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAIʻI AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PUBLIC HEALTH

MAY 2011

By

Jane J. Chung-Do

Dissertation Committee:

Deborah Goebert, Chairperson
Kathryn Braun
Jay Maddock
Earl Hishinuma
Karen Umemoto

ACKNOWLEDGEMENTS

ABSTRACT

  This three-part dissertation study aims to understand the way that school

connectedness develops in the Personal Transition Plan/Leadership (PTP/L) course, and

its implications for violence prevention, to assist Kailua High School in strengthening the

course and to deepen our understanding of the potential influence of school

connectedness on youth outcomes. Chapter one reviews the literature on youth violence

and school connectedness and describes the school-university partnership that supported

the evaluation of the PTP/L course. Chapter two reports the findings of a qualitative

study, which used focus groups to gather students' perceptions on the way that the PTP/L

course has influenced their sense of school connectedness. Using confirmatory factor

analysis, Chapter three describes the psychometric properties of a comprehensive school

connectedness scale that was developed to evaluate the PTP/L course. Chapter

four explains the findings of a quantitative study, which used structural equation

modeling to examine the level of students' sense of school connectedness at the end of

the course and its association with violent attitudes and behaviors. Chapter five

summarizes the findings, its implications, and future directions. The results suggest that

teachers play a key role in fostering school connectedness. School connectedness is a

multidimensional construct that includes school involvement, academic motivation,

school attachment, teacher support, and peer relations. Students who have high levels of

school connectedness are less likely to hold attitudes condoning violent behaviors. These

findings suggest that the PTP/L course may be a promising strategy to enhance school

connectedness and positive youth outcomes. More research is needed to determine

whether the findings apply to different Asian and Pacific Islander groups and to assess

the long-term impacts of the course. Because of mounting evidence that school

connectedness can foster positive youth outcomes, more efforts should be made to

develop and evaluate strategies that promote school connectedness.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

Interpersonal Youth Violence

Interpersonal youth violence is a growing public health concern in the United States (US). According to the Centers for Disease Control and Prevention (CDC), homicide is the second leading cause of death for youth between the ages of 10 and 24 (CDC, 2010b). In 2008, almost 700,000 of youth were treated in emergency departments for injuries resulting from violence. In addition to physical injuries, both the victims and the perpetrators of violence are at an increased risk for engaging in other risky behaviors, such as substance abuse and sexual behaviors, as well as for experiencing depression and posttraumatic stress disorder (Danielson et al., 2006). Youth violence can disrupt families and impact school safety and the learning environment. It also affects the health of communities by increasing health care costs, decreasing property values, and disrupting social services (CDC, 2010b). Recognizing the extensive impact of youth violence on individuals, families, and communities, Healthy People 2010 identified youth violence prevention as one of its priority goals (US Department of Health and Human Services, n.d.). According to national findings from the 2009 Youth Risk Behavioral Survey, 32% of high school students reported participating in a physical fight during the past 12 months, and 18% reported taking a gun, knife, or club to school in the past 30 days (CDC, 2010a). In addition, 20% have been bullied on school property in the past 12 months, and 5% did not go to school at least one day during the past 30 days because they felt unsafe at school or on their way to or from school.

Youth violence also encompasses emotional violence, which has detrimental effects on the mental and physical health of youth (Williams, Fredland, Han, Campbell, & Kub, 2009). Emotional violence, which is also known as psychological bullying, is defined as verbally taunting, threatening, or embarrassing another person, or manipulating relationships to socially isolate another person (Crick, Casas, & Nelson, 2002). Victims of emotional violence are at risk for poor academic engagement, low self-esteem, social anxiety, and psychosomatic symptoms (Nansel et al., 2001; Wilkins-Shurmer et al., 2003). Moreover, the experiences of victimization may have a cumulative and lasting impact on health outcomes well into adulthood (Alison, Roeger, & Reinfield-Kirkman, 2009).

With the growing popularity of cellular phones and online social networking websites among youth, cyberbullying is identified as a new form of emotional violence. Using electronic media, including email, cell phones, instant messaging, text messaging, and social networking websites, to threaten or harm others is considered as cyberbullying (Kiriakidis & Kavoura, 2010). As computers and cell phones become more accessible to youth, research suggests that as much as 49% of youth are involved in cyberbullying, either as bullies or victims (Raskaukas & Stoltz, 2007). Goebert, Else, Matsu, Chung-Do, and Chang (2010) found that cyberbullying victimization increases the likelihood of substance use, depression, and suicide attempts. Effects of cyberbullying may be more devastating than traditional forms of youth violence because perpetrators are able to continue harassing their victims without being physically present (Kiriakidis & Kavoura, 2010).

Asians and Pacific Islanders

Although youth violence is a recognized public health issue, youth violence research with Asians and Pacific Islanders is limited. Approximately 15.5 million Asians and Pacific Islanders live in the US, and comprise about 5% of the total US population (Office of Minority Health, 2009). While Asians and Pacific Islanders are among the fastest growing groups in the US, the relatively low proportion of people that fall under the Asian and Pacific Islander category in the US limit attention to and research with these groups. Furthermore, the "model minority" myth, which implies that the educational and socioeconomic successes seen in some Asian-Americans (primarily the descendants of the Japanese, Korean, and Chinese immigrants who came to the US in the late 1800s and the early 1900s) apply to all Asian and Pacific Islander groups, also contributes to a large disregard of Asian and Pacific Islander youth in violence and criminological studies (Le, 2002).

Compared to the rest of the US, Hawai'i's population includes a much larger proportion of Asians and Pacific Islanders who comprise two-thirds of the state population (US Census Bureau, 2010). Ensuring the healthy development of youth and reducing their risks for unhealthy behaviors is a concern among Hawai'i's schools and communities. According to findings from the 2009 Hawai'i Youth Risk Behavior Survey, 1 in 20 youth (5%) has carried a weapon in the last 30 days, and 1 in 3 youth (30%) has

been in a physical fight in the last year (Hawai'i State Department of Health, 2010b). In addition, cyberbullying is on a rise. In 2009, about 32% of Hawai'i's students reported that they have been hurt by having mean things said to them on the Internet or by email during the past 12 months, compared to 24% reported in 2007 (Hawai'i State Department of Health, 2010a). One in twelve students (8%) reported missing school at least one day in the past 30 days because they did not feel safe at school or on their way to or from school, equating to approximately 14,000 students statewide (Hawai'i State Department of Education, 2010). Furthermore, 66% of Hawai'i's public school students are of Asian and/or Pacific Islander ancestry (Hawai'i State Department of Education, n.d.). These findings demonstrate the need for more research with Asian and Pacific Islander youth to inform the development and expansion of effective violence prevention and positive youth development programs in Hawai'i.

School Connectedness

Youth spend the majority of their time in school where they can develop their social competence, enhance cognitive skills, and consider career pursuits. Students who are academically engaged, involved in school activities, enjoy school, and feel close to their teachers and classmates are more likely to have positive academic and health outcomes (Catalano, Haggerty, Oseterle, Fleming, & Hawkins, 2004; Klem & Connell, 2004; McNeely & Falci, 2004). This sense of school support is generally characterized as "school connectedness." Students who feel a strong sense of connection to their schools tend to have higher grades and more positive educational outcomes than those who lack a sense of school connectedness (Martin & Dowson, 2009; McNeely & Falci, 2004). Those who lack a sense of school connectedness often experience academic problems, which are considered to be a gateway to delinquency (Catalano, Loeber, & McKinney, 1999). Having a high sense of school connectedness is not only linked to positive educational outcomes, but is also protective against substance use, sexual behaviors, suicidal actions, and violence (Catalano et al., 2004; Klem & Connell, 2004; McNeely & Falci, 2004). Furthermore, Buckley, Sheehan, and Chapman (2009) found that school connectedness is more predictive than parent connectedness in the students' willingness to intervene if their friends engage in risky behaviors, such as physical fighting and substance use.

Research on school connectedness integrates both child and adolescent development theories, including the Attachment Theory and the Theory of Social Control. The Attachment Theory contends that for healthy social and emotional development to occur, young children need to develop a secure relationship with a primary caregiver who is sensitive and responsive to their needs (Bowlby, 1969; Karen, 1998). Although this attachment formation is most sensitive in the first few years of the child's life, influential attachments can develop well into adolescence and adulthood. This theory is supported by research that shows the presence of at least one caring adult in a youth's life enhances their ability to withstand negative influences, including poverty, parental addiction, family mental illness, and family discord (Center for Substance Abuse Prevention, 2000; Rak & Patterson, 1996; Werner, 1984). The Theory of Social Control expands on the Attachment Theory with implications for youth violence prevention. The Theory of Social Control proposes that once social attachments or bonds are strongly established, they exert an informal control on people's behavior by inhibiting behaviors that are considered deviant by the larger group (Gottfredson & Hirschi, 1990). Therefore, social values and beliefs that drive behaviors are internalized through attachments and relationships that are formed throughout the youth's lives.

Educational and public health research strongly support these theories and emphasize the importance of school connectedness for the healthy development of youth. Students who perceive that their teachers care about their personal and educational well-being are more likely to have positive academic and social outcomes (Battistich & Hom, 1997; Jenkins, 1997). Strong teacher-student relationships can protect students from suicidal and violent behaviors (McNeely & Falci, 2004). The impact of relationships that students have with individual teachers can extend to their identification with the school. For example, Voelkl and Frone (2000) found that students' lack of identification with school was significantly related to both alcohol and marijuana use. Active involvement in school-based extracurricular activities, which is another indicator of school connectedness, is related to a decrease in school dropout rates, particularly during the early years of high school and for high-risk youth (Mahoney & Cairns, 1997; McNeal, 1995). Moreover, Mahoney (1997) found that participation in extracurricular activities is related to lower rates of criminal offending. The increasing attention on school

connectedness led the CDC Division of Adolescent and School Health and The Johnson Foundation to sponsor the Wingspread Conference on School Connectedness in 2003. This conference brought together key educational and health researchers and representatives to review existing studies on school connectedness. This resulted in a report that listed evidence-based strategies that schools could implement to enhance school connectedness (CDC, 2009a).

Despite the growing research on school connectedness, there exists substantial inconsistency in the constructs and measures of school connectedness used across studies (Appleton, Christenson, & Furlong, 2008; Johnson, 2009; Whitlock, 2006). Many of these measures do not capture the multiple dimensions of the school connectedness construct. A review conducted by Johnson (2009) of 25 school connectedness studies revealed that various constructs of school connectedness were used across the studies, which included peer relations, teacher support, academic success, classroom and school culture, and perceptions of school safety and physical disorder. Libbey's (2004) review found a similar pattern, stating that "even within the same dataset [school connectedness] is measured by different scales with different names" (p. 281). Moreover, some studies use a single question to measure school connectedness, such as "How do you feel about your school?" (e.g., Thomas & Smith, 2004).

A comprehensive construct of school connectedness should include *behavioral* (e.g., participation in activities and attendance), *affective* (e.g., students' sense of attachment to the school and feelings toward their relationships to peers and teachers), and *cognitive* (e.g., how much students value learning and relevance of schoolwork for future endeavors) dimensions (Fredericks, Blumenfeld, & Paris, 2004; Jimerson, Campos, & Greif, 2003). One of the most widely used scales is the School Connectedness Scale that was adapted from the Add Health Survey. Although this scale has been shown to have good internal consistency and validity, it measures only affective components of school connectedness without assessing behavioral and cognitive components (Anderman, 2002; Libbey 2004; Sharkey, You, & Schnoebelen, 2008). Therefore, more research is needed to develop scales that accurately and comprehensively capture the multi-faceted nature of the school connectedness construct.

School-Based Interventions

Youth interventions can occur in multiple settings, including the home, school, and community. Schools are identified as an ideal location to implement youth interventions because they provide access to large numbers of youth. Next to the home, schools can contribute to shaping their identities and values (National Research Council, 2004). Moreover, youth spend the majority of their day in school. Schools and teachers can mediate risks for youth, especially for students who may not have strong parental and family support. Mentoring is an effective method of enhancing school connectedness. Mentoring programs can impact different risk factors while simultaneously fostering many protective factors (Herrera, Sipe, & McClanahan, 2000; LoSciuto, Rajala, Townsend, & Taylor, 1996; Tierny & Grossman, 1995). While various forms of mentoring exist, mentoring is generally viewed as a relationship over a prolonged period of time between two or more people where an older, caring, and more experienced individual provides guidance and support for the younger person, especially during critical transitional periods of the youth's life (Center for Substance Abuse Prevention, 2000). Mentoring programs are most commonly implemented in school or community settings. Although most school-based programs provide fewer mentor-mentee contact hours than community-based programs, the effectiveness of both types of programs are comparable. School-based programs are usually significantly less expensive per youth compared to community-based programs (annual cost of $567 compared with $1,369, respectively) (Herrera et al., 2000).

The transition into high school from middle school is a critical period that can be stressful for many youth. For example, more students fail in the 9th grade than other grades in high school. Therefore, schools hold back a sizable number of 9th graders, creating a "ninth grade bulge" that many schools experience across the country (National High School Center, n.d.). In the last 30 years, this bulge has more than tripled from 4% to 13% (Haney et al, 2004). Moreover, up to 20% of 9th graders end up dropping out of school entirely (Wheelock & Miao, 2005). Those who do remain in school are not immune to transitional and developmental challenges. For example, 9th graders are more likely to engage in violent behaviors than students of higher grades. According to the national 2007 Youth Risk Behavior Survey, 41% of 9th graders are involved in physical

fights compared to 36% of 10th, 35% of 11th, and 28% of 12th graders (CDC, 2010a). In addition, 9th graders (20%) are more likely to carry a weapon in the past 30 days compared to 11th (17%) and 12th (16%) graders.

As students move through from middle to high school, they must quickly adapt to dramatic increases in class and school sizes and changes in school policies, while preparing for their post-high school plans. Evidence shows that many high school graduates are not prepared to enter the workforce or pursue a higher education (National Association of Manufacturers, 2005; Peter D. Hart Research Associates, 2005). Many students do not possess the essential skills to begin a successful career, such as attendance, teamwork and collaboration, and work habits. Those who hope to pursue a higher education often do not have adequate prerequisites for acceptance to post-secondary educational institutions. To address these challenges, the Hawai'i State Board of Education (BOE) implemented Policy 4540, which states that all high school students must complete a Personal Transition Plan. The purpose of the Personal Transition Plan is to prepare and provide guidance to all Hawai'i high school students for their transition from high school to their post-secondary education and/or career plans (Hawai'i BOE, 2009). High schools have the autonomy to implement this requirement in a way that is conducive to their school setting and resources.

Kailua High School and the Personal Transition Plan/Leadership Course

Kailua High School is a public high school, located on the Windward side on the island of O'ahu that primarily serves the two communities of Kailua and Waimānalo (US Census Bureau, 2010). Kailua has a population of about 36,000 residents, which is more than four times the size of the Waimānalo population. Approximately 33% of Waimānalo residents are Native Hawaiian compared to only 6% in Kailua. Waimānalo families are larger but have lower median income compared to Kailua. Higher portion of Kailua residents (43%) have college education compared to Waimānalo residents (13%). Many youth from these two distinctly different communities come together at Kailua High School. At least two-thirds of the student body at Kailua High School is of Asian and/or Pacific Islander ancestry, with majority (53%) identifying as Native Hawaiian (Hawai'i State DOE School Status and Improvement Report, 2010). Figure 1.1 displays the ethnicities of Kailua High School students during the 2009-2010 school year. About half

of the student body (50.3%) qualifies for free or reduced-cost lunch, which is an indicator of low socioeconomic status. Students from families with annual gross household incomes of less than $26,567 for two people, $33,338 for three people, $40,109 for four people, and $46,880 for five people in the household qualify for the free or reduced-cost School Lunch Program (Hawaiʻi State Department of Human Services Benefit, n.d.).
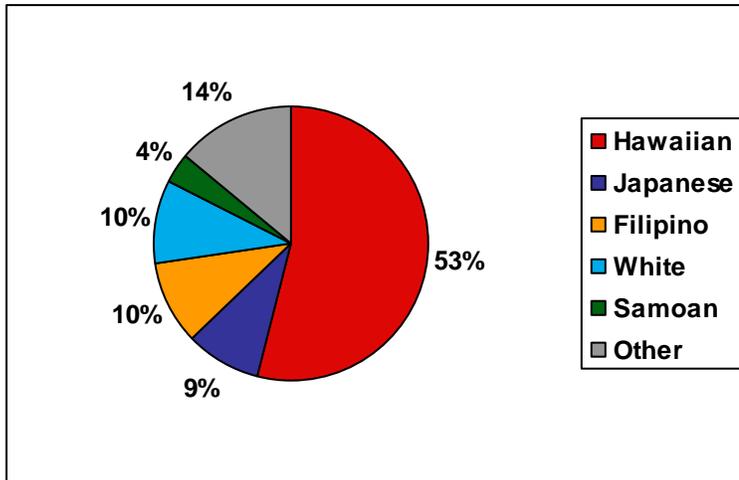
Figure 1.1. Ethnicity of Kailua High School Students in 2009-2010.

In response to Hawaiʻi Board of Education Policy 4540, Kailua High School created a course called Personal Transition Plan/Leadership (PTP/L). In addition to college and career planning, the PTP/L course incorporates components of leadership and school connectedness (denoted by the addition of "Leadership" to the name of the course). All Kailua High School students must register and participate in the weekly PTP/L course every year. Throughout the course, students learn about various career and college choices and develop skills to create tools to help them reach their goals. During the senior year, students must submit a Personal Transition Plan binder, which includes a personal statement, resume, and samples of their best work produced during their time at Kailua High School. The PTP/L lessons also are designed to build students' leadership skills through various community and school service activities. Studies show that engaging students in service-learning and community service activities enhances academic outcomes and reduces problem behaviors among youth (Billig & Klute, 2002;

Meyer & Hofshire, 2003). The positive effects of community service have been documented with other students in Hawaiʻi (Yamauchi, Billig, Meyer, & Hofshire 2006).

Another goal of the PTP/L course is to enhance students' sense of school connectedness at Kailua High School by encouraging the development of positive relationships, especially between students and their PTP/L teacher. Because positive relationships with an adult enhance youth resilience (Center for Substance Abuse Prevention, 2000; Rak & Patterson, 1996), class sizes are purposefully kept small, with 10-15 students in each class to facilitate a mentoring relationship between the teacher and students. Students remain with the same teacher and classmates throughout their time at Kailua High School to develop consistent and positive relationships in hopes of fostering positive outcomes (Black, 2000; Reynolds, Barnhart & Martin, 1999).

The PTP/L course is designed to develop the students' sense of school connectedness in developmentally appropriate ways from freshman to senior year. Lessons for underclassmen (freshmen and sophomores) focus on increasing students' interactions with their classmates, teachers, and staff at Kailua High School through service learning and team-building activities. These lessons encourage the students to find their niche at Kailua High School and participate in school-related activities in an effort to build their attachment to the school, enhance their school involvement, and develop connections with their PTP/L teachers and classmates. The lessons for upperclassmen (juniors and seniors) intend to motivate students to reflect on their educational and career aspirations after high school and develop useful skills and products for their post-high school plans. The lessons also focus on building students' commitment to the school and strengthening their relationships within their PTP/L class.

School-University Partnership

In 2003, a partnership between the Asian/Pacific Islander Youth Violence Prevention Center and Kailua High School was created to assess the factors that contribute to youth violence, in hopes to mitigate youth turning to violence. The Asian/Pacific Islander Youth Violence Prevention Center was established in 2000 by the University of Hawaiʻi-Mānoa Department of Psychiatry in the John A. Burns School of Medicine. Funded by the CDC, the Asian/Pacific Islander Youth Violence Prevention Center is one of ten National Academic Centers of Excellence for Youth Violence across

the country. Other centers are based in universities across the country, including Harvard University, Columbia University, Johns Hopkins University, and the University of California-Berkeley. The mission of the Asian/Pacific Islander Youth Violence Prevention Center is to reduce and prevent interpersonal youth violence among Asian and Pacific Islander youth by developing an effective, comprehensive, public health, and culturally competent model for Hawaiʻi communities (Mayeda, Hishinuma, Nishimura, Garcia-Santiago, & Mark, 2006).

The partnership between the Asian/Pacific Islander Youth Violence Prevention Center and Kailua High School began with a collaborative retreat in 2003 where the principal of Kailua High School agreed to partner with the Asian/Pacific Islander Youth Violence Prevention Center in conducting a periodic school-wide survey to assess risk and protective factors of youth violence and other risky behaviors. The partnership quickly evolved beyond this research project, as various avenues for interventions were explored, developed, implemented, and evaluated (Umemoto et al., 2009). The success of this school-university partnership has been reciprocally rewarding. Kailua High School graciously welcomed the Asian/Pacific Islander Youth Violence Prevention Center and provided access to the student body, teachers, staff and school programs. At the same time, the Asian/Pacific Islander Youth Violence Prevention Center provided Kailua High School with ongoing technical and research assistance with evaluating their existing programs and developing potential projects to meet the needs of the school. In 2009, Kailua High School acknowledged the partnership by incorporating the Asian/Pacific Islander Youth Violence Prevention Center into their official Academic Plan under the Wellness section.

Figure 1.2 displays the timeline of example activities and projects that resulted from the partnership. This includes assisting with annual school events, such as Jumpstart Day and Community Service Day. Both events focus on strengthening the students' sense of school connectedness and community responsibility (Umemoto et al., 2009). M&M Night, another annual event, began in 2007 to bring Waimānalo and Kailua community members together for a family-friendly event in hopes of strengthening school-community connections (Filibeck et al., 2010). To build capacity within the school, the Asian/Pacific Islander Youth Violence Prevention Center also provides training in youth

violence prevention strategies to teachers and staff at Kailua High School and the surrounding school district through an annual summer course approved by the Hawaiʻi Department of Education (Umemoto et al., 2009).
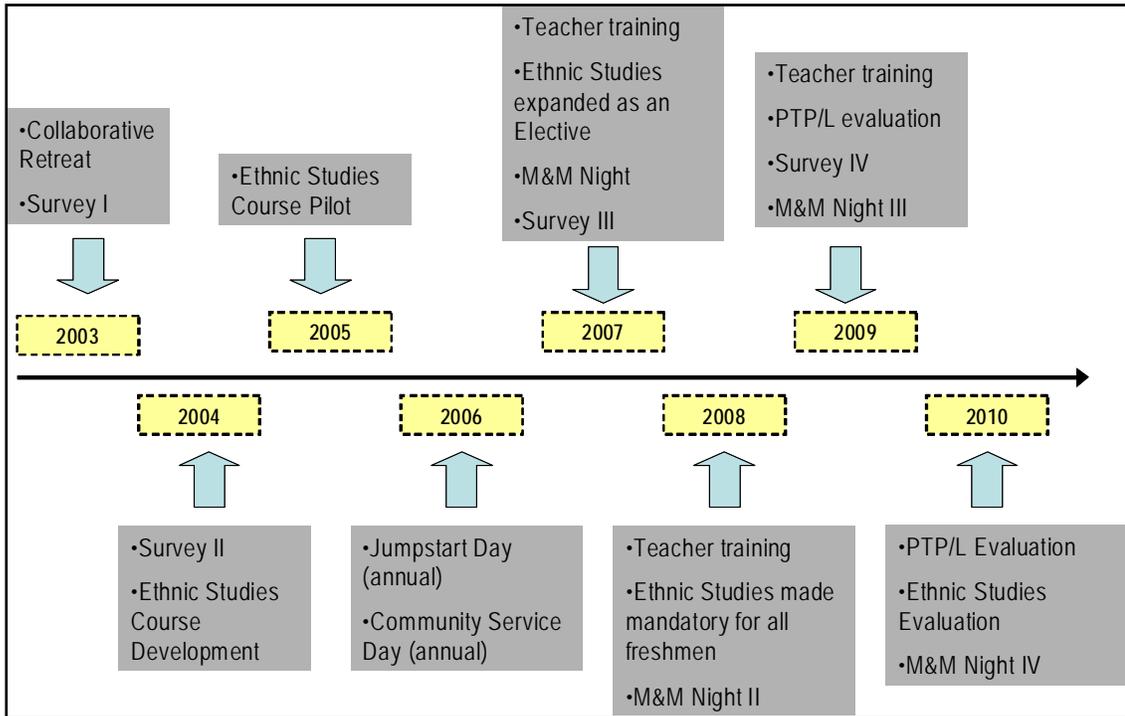
Figure 1.2. Timeline of Kailua High School and Asian/Pacific Islander Youth Violence Prevention Center Partnership

Throughout this school-university partnership, Kailua High School has readily modified their school curricula to create a safer and more supportive school climate. For example, the Asian/Pacific Islander Youth Violence Prevention Center partnered with Kailua High School Social Studies teachers in 2004 to develop and pilot an Ethnic Studies class, with the aim of providing a safe academic space for students to learn, discuss, and reflect on their ethnic heritage as well as the ethnic diversity of the Kailua High School student body (Makaiau, 2010). Because of the positive responses from the students, families, and community, the school incorporated the course into the school curriculum as an elective in 2007. In 2008, Ethnic Studies was made a mandatory course for all freshmen to provide an opportunity for all incoming students from the two

different communities of Waimānalo and Kailua, to learn about each other and promote a sense of connectedness with one another.

The PTP/L course is another Kailua High School curriculum that has included Asian/Pacific Islander Youth Violence Prevention Center's involvement. Representing Asian/Pacific Islander Youth Violence Prevention Center as a co-principal investigator on the evaluation of the PTP/L course, the author of this dissertation study collaborated with a team of ten Kailua High School teachers who developed the PTP/L curriculum. Since the Spring of 2009, the evaluation team focused on course evaluation and curriculum refinement (Figure 1.3). Through this partnership, the team developed and administered teacher and student PTP/L evaluation surveys in the Spring of 2008 and the Fall of 2009. In addition, the team conducted interviews with teachers and focus groups with students to gain an in-depth understanding of course strengths and areas for improvement. The school staff received the findings of these evaluative efforts in multiple settings, which have resulted in changes and improvements to the course. For example, both teachers and students reported that assemblies placed during the PTP/L time period hindered the continuity of weekly lessons and assignments. As a result, the school moved the assemblies out of the PTP/L time period. Teachers also had difficulty understanding how the lesson objectives tied into the overall purpose of the course and felt that the curriculum was disjointed. Although students reported that their relationship with their PTP/L teachers were positive, they did not feel as connected with their classmates. They attributed this to the individualized nature of the majority of the class activities and assignments. In response to the feedback from the teachers and students, Kailua High School provided stipends to the PTP/L team to refine and strengthen the curriculum during the Summer of 2009. The Asian/Pacific Islander Youth Violence Prevention Center and the PTP/L team reorganized the lessons across grades and created a curriculum map for each PTP/L teacher to enhance cohesiveness of the lessons and transparency of the lesson objectives. Team-building activities and collaborative components became integrated into many of the lessons.
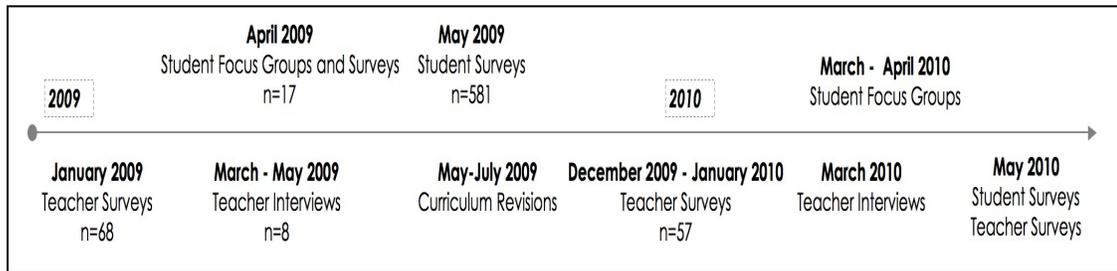
Figure 1.3. Timeline of PTP/L Course Evaluation

Framework of Dissertation Study

Because youth spend a majority of their time in school, school-based programs hold a promising approach to youth violence prevention. Studies suggest that high levels of school connectedness reduce the youth's risk of engaging in substance use and violence (Catalano et al., 2004; Klem & Connell, 2004; McNeely & Falci, 2004). However, limited studies exist with Asian and Pacific Islander youth. As noted earlier, the Asian and Pacific Islander group is one of the fastest growing minority groups in the US. Asians and Pacific Islanders are projected to comprise 20 million of the US population by 2020. By 2050, approximately one out of every ten Americans will be of Asian and/or Pacific Islander descent (US Office of Human Resources, 2008). Therefore, it is imperative to develop a better understanding of the experiences of the Asian and Pacific Islander population and identify protective factors that can be strengthened through effective interventions. Because one of the goals of the PTP/L course is to enhance school connectedness, this three-part dissertation focused on evaluating Kailua High School's PTP/L course using a mixed-methods approach (see Figure 1.4).
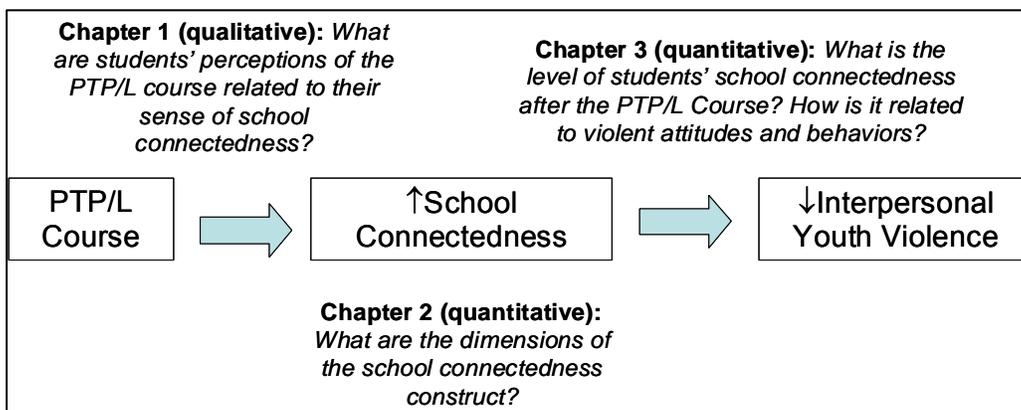
Figure 1.4. Conceptual Model of Dissertation Framework

The following three chapters are formatted as manuscripts to be submitted for publication in a scientific journal. The first part of the dissertation study (Chapter two) reports the findings of a qualitative study that gathered students' perceptions on how the PTP/L course impacts their sense of school connectedness. Students were randomly selected and recruited from each grade to participate in focus groups. Using a qualitative method to evaluate the course allowed students to share their experiences of the course and provide detailed examples on how the course influenced their sense of school connectedness.

The second part of the study (Chapter three) aimed to examine the psychometric properties of a school connectedness scale using confirmatory factor analysis. This scale was developed and adapted from existing measures to comprehensively measure school connectedness for the PTP/L course evaluation. The developed scale includes measures of student perception of their relationships with teachers and classmates (teacher support/peer relations), involvement in school-related activities and events (school involvement), sense of attachment and belongingness to the school (school attachment), and commitment to the school's educational goals (academic motivation) (Jenkins, 1997; Libbey, 2004; McNeely & Falci 2004; Rodney, Johnson, & Srivastiva, 2005).

The third part of the study (Chapter four) utilized quantitative methods to analyze data from student surveys administered to evaluate the PTP/L course. Analysis of Variance (ANOVA) was used to test for any demographic differences in students' level of school connectedness. School connectedness is a protective factor to the healthy development of youth by preventing youth violence (Catalano et al., 2004; CDC, 2009a; Klem & Connell, 2004; McNeely & Falci, 2004). Structural Equation Modeling (SEM) was used to assess the role school connectedness plays in the relationship between student demographic characteristics and violence outcomes, including physical and emotional violent behaviors, cyberbullying, and violent attitudes.

CHAPTER 2. STUDENTS' PERCEPTIONS OF A HIGH SCHOOL COURSE DESIGNED TO ENHANCE SCHOOL CONNECTEDNESS

Abstract

This qualitative study is a part of an evaluation of a four-year high school course that aims to enhance students' school connectedness. Focus groups were conducted with a random selection of students from each grade to evaluate the way that the course impacts students' sense of school connectedness. Results revealed that students perceive teachers to play an essential role in building the students' sense of school connectedness in the course. Students also view the small class size and staying in the same class for all four years as important components in supporting the relationship-building aspect of the course, which enhances students' motivation for academic achievement and post-high school plans. Suggestions for ways that teachers can help build students' sense of school connectedness through the course included integrating their personal experiences into the lessons and facilitating more interactive discussions and team-building activities. The findings of this study suggest that students recognize the course as a valuable opportunity to build personal relationships that are essential to their sense of school connectedness. Schools should make more effort at incorporating strategies that build students' sense of school connectedness by providing relationship-building opportunities.

Introduction

Adolescence is a developmental stage characterized by cognitive, emotional, physical and attitudinal changes. During this time, youth face a host of challenges that can undermine their well-being and educational potential. High rates of school failure, substance use, violence, pregnancy, and sexually transmitted diseases among youth in the US have increased the urgency of researchers to assess risk factors and incorporate protective factors into interventions that can reduce and prevent risky behaviors (Youngblade et al., 2007). Schools are an ideal location to implement interventions because they provide access to large numbers of youth (National Research Council, 2004). Moreover, youth spend the majority of their day in school. School interactions help shape their identities and values, along with influences from the home. Feeling connected to people at their school, having a strong sense of attachment to their school, and being involved in school activities are important factors for youth wellness. Studies show that this sense of school support, generally characterized as "school connectedness," is consistently related to positive health and educational outcomes of youth (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Klem & Connell, 2004; McNeely & Falci, 2004).

Research on school connectedness integrates child and adolescent development theories (Catalano et al., 2004). Attachment Theory contends that for healthy social and emotional development to occur, young children need to develop a secure relationship with a primary caregiver who is sensitive and responsive to their needs (Bowlby, 1969). Although attachment formation is most sensitive early in the child's life, influential attachments can develop well into adolescence and adulthood. The school represents an important area where attachment among youth and school staff can form, develop, and strengthen to enhance positive development and buffer negative experiences for youth. The Theory of Social Control expands on Attachment Theory (Catalano & Hawkins, 1996), which proposes that once strong social attachments are established, they exert an informal control on behavior, specifically inhibiting behaviors considered deviant by the larger group (Gottfredson & Hirschi, 1990). Therefore, social values and beliefs that drive behaviors are internalized through attachments and relationships formed throughout the youth's lives.

Educational and public health research support these theories and highlight the importance of school connectedness in the healthy emotional and cognitive development of youth. Resnick et al. (1997) first defined and measured school connectedness through the National Longitudinal Study of Adolescent Health (Add Health Survey). This seminal study found that students' sense of school connectedness was one of the strongest protective factors of youth high-risk behaviors, such as substance use, violence, and suicidal attempts. Since then, school connectedness has increasingly gained recognition as an important protective factor for positive youth development (Centers for Disease Control and Prevention [CDC], 2009a).

Youth who feel a strong sense of connection to their schools tend to have high grades and positive educational outcomes (Martin & Dowson, 2009; McNeely & Falci, 2004). Youth who feel more connected to their school are also more likely to take part in extracurricular activities, which is another indicator of school connectedness. Generally, participating in extracurricular activities is related to high educational status at young adulthood, increased interpersonal competence, and prevention of school dropout (Mahoney, Cairns, & Farmer, 2003; McNeal, 1995). However, some studies found negative outcomes related to high-contact sports (Kreager, 2007; Paetsch & Bertrand, 1997). According to Jennings (2003), high levels of school involvement and the feeling of being supported by school staff were positively correlated to grade point averages (GPAs). Strong teacher support can prevent youth from experimenting with drugs, alcohol and sexual activity (McNeely & Falci, 2004). Those who lack a strong sense of school connectedness often experience academic problems, which can lead to delinquency and risky behaviors (Catalano, Loeber, & McKinney, 1999). Voelkl and Frone (2000) also found that students who do not identify strongly with their schools are more likely to use alcohol and marijuana.

Promoting school connectedness in high school is essential, given that youth's sense of school connectedness decreases as they age, especially during the transition from middle school to high school (Whitlock, 2006). This transitional period is reported to be stressful, yet critical, for many youth as they face a larger and more diverse student body and school staff and are expected to behave more responsibly and independently (Kipke, 1999). More students academically fail in the 9th grade than other grades in high school.

Therefore, a sizable number of 9th graders are held back, creating a "ninth grade bulge" that many schools experience across the country (National High School Center, n.d.). In the last 30 years, this bulge has more than tripled, with 13% of 9th graders being held back (Haney et al, 2004). Moreover, up to 20% of 9th graders end up dropping out of school entirely (Wheelock & Miao, 2005). Those who do remain in school are not immune to transitional challenges. For instance, 9th graders engage in violent behaviors more than students of higher grades. According to the national 2007 Youth Risk Behavior Survey, 41% of 9th graders have been involved in physical fights compared to 36% of 10th, 35% of 11th, and 28% of 12th graders (CDC, 2010a). Because school connectedness has been recognized as a protective factor, which can mitigate these negative outcomes, the CDC Division of Adolescent and School Health and The Johnson Foundation sponsored the Wingspread Conference on School Connectedness in 2003. This conference brought together key educational and health researchers and representatives to review existing studies on school connectedness. This resulted in a report that listed six evidence-based strategies that schools could implement to enhance school connectedness. This report also recommends that schools and communities should develop and evaluate programs that aim to enhance school connectedness (CDC, 2009a).

In 2007, the Hawai'i Board of Education (BOE) implemented Policy 4540 that require all high school students to complete a Personal Transition Plan. The purpose of Personal Transition Plan is to prepare and provide guidance to all Hawai'i high school students for their transition from high school to their post-secondary education and/or career plans (Hawai'i BOE, 2009). High schools have the autonomy to implement this requirement in a way that is conducive to their school setting and resources. In response to the BOE initiative, Kailua High School created a course called Personal Transition Plan/Leadership (PTP/L). In addition to components of college preparation and career planning, Kailua High School's PTP/L course incorporates leadership skills development and focuses on enhancing students' sense of school connectedness in multiple ways throughout their time at Kailua High School. All Kailua High School students must register and participate in the weekly PTP/L course every year. Because positive relationships with an adult have been shown to enhance youth resilience (Center for Substance Abuse Prevention, 2000; Rak & Patterson, 1996, Werner, 1984), class sizes

are purposefully kept small with 10-15 students in each class to facilitate a mentoring relationship between the teacher and students. In addition to classroom teachers, school counselors and administrators also teach the PTP/L course. Students remain with the same PTP/L teacher and classmates throughout their time at Kailua High School to develop consistent relationships in hopes of fostering positive outcomes (Black, 2000; CDC, 2009a; Reynolds, Barnhart & Martin, 1999).

The PTP/L course is designed to build students' sense of school connectedness in developmentally appropriate ways from freshman to senior year. Lessons for underclassmen (freshmen and sophomores) are designed to increase students' interactions with their classmates, teachers, and staff at Kailua High School through service learning and team-building activities. These lessons encourage students to find their niche at Kailua High School and participate in school-related activities in an effort to build their attachment to the school, enhance their school involvement, and develop connections with their PTP/L teachers and classmates. Lessons for upperclassmen (juniors and seniors) aim to motivate students to reflect on their educational and career aspirations after high school and provide useful skills and products (i.e., resumes and personal statements) for their post-high school plans. The lessons are also focused on building students' commitment to school and strengthening their relationships in their PTP/L class.

In 2008, a team of Kailua High School teachers began collaborating with the Asian/Pacific Islander Youth Violence Prevention Center to evaluate the PTP/L course. With funding from the CDC, Asian/Pacific Islander Youth Violence Prevention Center was established in 2000 by the University of Hawai'i-Mānoa Department of Psychiatry in the John A. Burns School of Medicine, to prevent violence and promote positive development among Asian and Pacific Islander youth (Mayeda, Hishinuma, Nishimura, Garcia-Santiago, & Mark, 2006; Umemoto et al., 2009). As part of this evaluation, a series of focus groups were conducted with a random selection of students from each grade to understand how the PTP/L course may impact students' sense of school connectedness. This qualitative study examines the perceptions shared by the students in the focus groups.

Methods

Participants

Kailua High School, located on the island of Oʻahu in Hawaiʻi, serves approximately 900 students each school year. The student population is largely comprised of Native Hawaiian and Asian students from the communities of Kailua and Waimānalo (Hawaiʻi State DOE School Status Improvement Report, 2010). Nearly half of the students receive free or reduced-cost school lunch, which is an indicator of low socioeconomic status. To qualify for free or reduced cost lunch, students must be from households with an annual gross income of less than $26,567 for two people, $33,338 for three people, $40,109 for four people, and $46,880 for five people (Hawaiʻi State Department of Human Services Benefit, n.d.).

Out of 273 students invited to the information meetings, 67 (36 boys and 31 girls) participated in the focus groups, which resulted in a total participation rate of 25%. Out of the 67 participants, 20 were 9th graders, 12 were 10th graders, 16 were 11th graders, and 19 were 12th graders. The number of participants per focus group ranged from 4 to 12. To assess the representativeness of the sample, archival data from the school were collected to compare sex, ethnicity, academic standing, and socioeconomic status of the sample with the student body using chi-square. GPA was used as an indicator of academic standing, and being qualified to receive free or reduced-cost school lunch was used as indicator of socioeconomic status. The results of the chi-square test revealed that the focus group sample was statistically similar to the student body (Table 2.1).

Table 2.1. Sample Description in Comparison to the Student Body

	Sample	Student Body	Significance test
Sex			$\chi^2=.20\ [df=1],\ p=.65$
Male	36	472	
Female	31	458	
Ethnicity			$\chi^2=5.2\ [df=5],\ p=.39$
Native Hawaiian	28	485	
Filipino	10	90	
Japanese	8	80	
White	8	87	
Pacific Islander	2	32	
Grade Point Average			$\chi^2=6.27\ [df=3],\ p=.10$
A	5	68	
B	31	307	
C	20	305	
D	9	212	
Free or reduced-cost lunch			$\chi^2=.03\ [df=1],\ p=.86$
Yes	28	454	
No	29	448	

Measures

A team of Kailua High School teachers and Asian/Pacific Islander Youth Violence Prevention Center staff members who were involved in the evaluation of the course developed a semi-structured focus group guide of approximately ten questions (see Appendix A). Students first reflected on their general feelings toward the PTP/L course, such as what they liked and areas they thought could improve. The questions further explored the impact of the course on the various components of the students' sense of school connectedness, such as their academic motivation, school involvement, school attachment, and relationships with their PTP/L teachers and classmates. These components are essential factors of the school connectedness construct (Chung-Do, Goebert, & Chang, 2011; Fredericks, Blumenfeld, & Paris, 2004; Jimerson, Campos, & Greif, 2003; Johnson, 2009).

Procedures

To recruit our sample, approximately 70 students from each grade level were randomly selected from the student body using random numbers generated by Microsoft Excel. Selected students received a note through their class, inviting them to attend a 10-minute informational meeting about the study during the recess period. Students who attended the meeting received information about the focus groups, and interested students

received a parent permission form (see Appendix B). Students who returned the signed parent permission forms participated in a focus group. Two focus groups per grade were conducted for a total of eight focus groups, which included a mix of boys and girls.

Youth assents (see Appendix C) were obtained at the beginning of the focus groups that were facilitated by two Asian/Pacific Islander Youth Violence Prevention Center staff members. To encourage participation, all focus groups occurred during the 30-minute lunch period and lunch was provided. Facilitators introduced ground rules, which outlined the need to listen, participate respectfully, and keep group information and discussions confidential. Facilitators did not tape-record the focus group discussions to avoid confidentiality concerns, although they took notes throughout the focus groups. One facilitator was primarily responsible for asking questions while the other took notes on observations and students' comments. All identifying information was removed from the final notes. Students who participated in the focus groups received two movie tickets as compensation for their time. This study was approved by the University of Hawaiʻi Institutional Review Board.

Analysis

After each focus group, facilitators independently coded the notes taken from the focus groups using the pre-established themes based on the focus group guide. Additionally, emerging themes were identified and added to the codebook. Allowing codes and themes to emerge from the focus group notes support the flexibility that is needed in qualitative research to be attuned and grounded in the voices of the participants (Silverman & Marvasti, 2008). This "planned flexibility" (p. 45) approach recognizes that "researchers cannot know from the start where their observations may lead" (p. 122) (Silverman & Marvasti, 2008). Facilitators compared the codes and themes to assess the level of agreement, which were more than 80%.

Results

Students were forthcoming and were able to discuss, agree, and disagree freely and respectfully with each other without disrupting the discussion. Despite the limited time available for the focus groups, most students answered the questions that were asked. Most students seemed to have enjoyed the focus group experience and sharing their thoughts. Many asked if they could participate in the focus group again, with one

student commenting, "This was like therapy!" Analysis of their responses provided during the focus groups revealed five main themes described below. Generally, no noticeable sex or grade level differences emerged across the themes. Although the themes aligned with the pre-ascribed codebook, the importance of the teacher's role emerged as a strong theme that permeated almost every aspect of the focus group discussion (see Table 2.2).

Table 2.2. Matrix of Students' Responses of PTP/L Course Evaluation

Teacher as key	• Teachers are key to the effectiveness of the course. • Most students would turn to their PTP/L teacher for help with school related issues; some would go for personal issues. • The small class size and staying with the same class for four years support relationship-building. • Disengaged teachers lead to disengaged students. Disengaged teachers hand out worksheets without much instructions or effort in making the lessons interactive. • Teachers who make the effort to personalize lessons with their personal stories and facilitate interactions among the class make the lessons more meaningful and effective to the students.
Enhancing peer connections	• Some students have made friends with people in their PTP/L class that they otherwise wouldn't be friends with while others feel that more can be done to bring the class closer. • More teambuilding is needed within the class. They need to be conducted throughout the school year. • Teachers can enhance peer connection by conducting more interactive activities.
Academic motivation	• The course helps increase students' awareness and knowledge of post-high school plans and options. • Students appreciate learning how to write resumes and personal statements. • The course helps motivate students to do better in school and have bigger goals.
Sense of school attachment	• School-wide activities, such as the Community Service Day and Senior Day, help enhance students' sense of belonging to the school. • Active participation of teachers help students feel more connected.
School involvement	• School involvement may be fostered through the relationships students have with their PTP/L teacher. • Learning how school involvement can boost college or job applications is effective in encouraging school involvement.

Teacher as key. The strongest theme that emerged from the focus group discussion was the critical roles that teachers play in the success of the course. All the students agreed that the relationship the teacher had with the students was the key to making the course effective. Most students reported that they got to know their teachers better in a way that their regular classes did not allow them to. They felt that the small

class size and staying with the same class for all four years helped them create a stronger "connection" with their teacher. These students used terms that implied that the PTP/L course is perceived as a place of safety by describing their PTP/L teacher as their "mom" or their class as a "family" who they could go to every week. Teachers who were perceived as effective were those "who can be your friend but you know who is in charge." Most students stated they would turn to their PTP/L teacher for help with school-related concerns, such as problems and advice regarding their coursework, other teachers, and assignments in this course as well as other classes. About half of the participants said they would turn to their PTP/L teacher for personal issues, such as with family or dating problems. A few students also commented that their teachers would give them good advice about "life" in general and prevented them from getting into fights or engaging in substance use.

Students seemed to be very sensitive and observant of the teachers' attitude toward the class. A handful of students commented that they did not enjoy the course because their teachers seemed disengaged. These students noticed how the lack of the teachers' interest and enthusiasm impacted the students to not take the class seriously. When asked to describe how they knew the teachers were disengaged, students shared that these teachers would merely hand out worksheets and instruct them to fill them out individually without clear or well thought-out instructions. It was apparent to students that these teachers did not put any effort in making the lessons relevant to the students' lives. Students explained that teachers who were willing to personalize the lessons by sharing personal stories of their journey from high school and beyond made the lessons more meaningful and memorable. This was illustrated in a student's comment that PTP/L teachers should "share more examples from their own lives" rather than just instructing the students to "do this, do this."

Enhancing peer connections. Students' sense of connectedness to their peers in their PTP/L class was mixed. A handful of students shared that they became friends with people who they otherwise would not have befriended. Some students said they got to know at least one new person each semester. Students observed that the small class size also encouraged more students to participate in the lessons because "no one can cruise in the back [of the class]." However, other students did not feel very connected to their

classmates. One student used the word "scattered" to describe his class. They attributed this to the fact that many of the lessons are heavily based on "paperwork" that teachers would hand out and instruct the students to complete individually. They felt that this type of work was not meaningful. Again, teachers were seen as playing a critical role in the course in enhancing connections among the students. As one student suggested, teachers need to "inspire the class" to interact and "break apart the cliques."

Students wanted to connect to each other by engaging in discussions and group activities. For example, one student explained how his PTP/L teacher spent the first half hour with the class to discuss how everyone's weekend was, which helped his class grow closer. Although this PTP/L teacher left the school, which resulted in the class being assigned to a new teacher, his class remained connected with each other because the first teacher helped develop a closeness within the class by initiating and facilitating these informal discussions. Students observed that some teachers should be encouraged and trained to build relationships within the class as well as provide college and career guidance. They commented that because the class spends four years together, more time should be dedicated to enhancing a sense of closeness within the PTP/L class. Students asked for more team-building activities to be conducted throughout the school year, rather than just once at the beginning of every school year.

Academic Motivation. According to the participants, the course has been generally successful in motivating students to have "bigger and higher goals," by increasing their awareness of various options they have for the future and the steps required to reach them. A few students commented that they were planning to go to a community college, but the PTP/L course had opened their eyes to considering a four-year university. Many freshmen also commented that they have never seriously thought about college or their plans after high school. Having a set time to think about and discuss their plans for life after high school was helpful in comprehending how decisions they make now could affect their future. The PTP/L course made them realize "what you can possibly do with good grades" and motivated them to do well in school to reach those goals. Some students mentioned the quarterly GPA reports, which helped them track their GPA across the school years, providing them a concrete picture of their progress. They also enjoyed and valued learning practical skills that they can use in the future, such as

25

writing resumes and personal statements. Juniors and seniors specifically commented that the topics they learned in the class, such as learning about average salaries for specific jobs they are interested in, affected their decisions regarding their future. Thus, the course provided students "a set time to think about their future" by creating a collective experience that can be shared and shaped with their peers and teachers.

Sense of school attachment. When asked how the course impacted their sense of attachment to the school, students mentioned taking part in school-wide activities that were affiliated with the course. In particular, students enjoyed Community Service Day, which was a day where all students and teachers at Kailua High School participated in grade level service projects at the school or in the community. For example, the sophomore class conducted a beach clean-up and the senior class was involved in a school beautification project this past school year. Students described the Community Service Day as a day where they could "be active" and get to know their teachers and other classmates outside the classroom, while "making a difference." The majority of students felt that more could be done in their PTP/L course to promote their sense of attachment to the school. They suggested more projects or activities to bring together the different grade levels. The freshmen mentioned a Senior Day that they enjoyed where a freshmen PTP/L class partnered with a senior PTP/L class. The seniors came to the freshmen class to share advice with them on how to make the best of their high school experience and what they wish they knew when they were freshmen.

School involvement. Students suggested that their level of school involvement depended on their relationship with their PTP/L teacher. If students felt that their PTP/L teacher cared about their well-being and encouraged them to check out a club, join sports, or attend a school event, they were more likely to comply. For example, a PTP/L teacher, who everyone in the class liked and respected, urged the class to attend a recruitment meeting for Leo Club (a volunteer organization). Focus group participants reported that more than half of the students from their class were present at the meeting. Students also commented that encouraging school involvement by framing it as a way to boost their college or job application has also motivated them to become more involved. Students also shared that some PTP/L teachers gave extra credit to motivate students to participate in or volunteer at school events. One student shared that he joined the volleyball team

after a lesson where the students listed all their hobbies in an effort to identify a potential extracurricular activity to join. He explained that being on the volleyball team encouraged him to get good grades so he could remain on the team. However, students generally felt that more could be done to encourage them to become more involved in school activities.

Discussion

This study aimed to understand the way that the PTP/L course impacts multiple indicators of school connectedness by gathering students' perceptions. Our findings suggest that the students perceived the PTP/L course as a unique opportunity that can foster relationships among teachers and students over a period of four years. Most students in this study perceived that the small size and the duration of the class provide more time and opportunities for students and teachers to get to know each other. This opportunity may be valuable, especially for high school students. As youth move from elementary to middle school to high school, school and class sizes grow larger and interactions become less centralized, thereby making it more difficult to create opportunities for consistent relationships to be built between teachers and students. For example, students in elementary and middle schools are taught by a few teachers who teach a variety of subjects. In contrast, high school students are taught by many subject-specific teachers. "Homerooms" are widespread in elementary and middle schools, whereas they are less common in high school, limiting opportunities for consistent interactions among students and teachers. These factors may partly explain the decrease in school connectedness found as grade level increases (Bond et al., 2007; Marks, 2000; Whitlock, 2006).

Given that students in this study expressed appreciation for the small class size and the duration of the class, promoting opportunities for consistent interactions in high schools may enhance school connectedness. The PTP/L course supports one of the recommendations made by the National Research Council (2004) to "create smaller learning communities that foster personalized and continuous relationships between teachers and students" to better engage high school students with their school experience (p. 6). In addition, the CDC recommends that schools should be structured so that teachers stay with the same students through two or more years in high school and to

reduce class sizes to ensure more time for individualized assistance (CDC, 2009a). Although other interventions have been developed to enhance school connectedness and improve student outcomes, such as the Check & Connect program which targets at-risk youth (Anderson, Christenson, Sinclair, & Lehr, 2004), few are designed to impact all of the student body.

The relationship-building aspect of the course was integrated in almost every aspect of the focus group discussion. The central role of teachers in students' connectedness with school and wellness has been highlighted in both quantitative and qualitative studies (Faircloth, 2009; Jennings, 2003; Skinner & Belmont, 1993; Voisin et al., 2005; Whitlock, 2006). Voisin et al. (2005) found that teacher connectedness was negatively related to drug and sexual risk behaviors. Adolescents with low teacher connectedness were almost twice as more likely to have used marijuana and had sex. Whitlock (2006) found that teacher relationships were cited by students in focus groups as the most powerful factor in fostering or discouraging school connectedness. This study also emphasized the importance of adult-youth exchange in and outside of the classroom. For example, student perceptions of teachers' willingness to provide time and assistance and assess youth character based on more than age, academic standing, and peer network were important to how engaged students felt at school.

Furthermore, Jennings (2003) found that caring teachers are important factors for student motivation and achievement. Students described caring teachers as those who notice students and check on their well-being, make discussions relevant to students' experiences, listen without judgment, and invite students to talk outside of class time (Jennings, 2003). Similarly, the students in our study expressed appreciation for teachers who are willing to open up to the students by sharing their personal stories of their journey as a high school student and make a concerted effort to make the lessons more relevant and memorable. A good teacher was also described as someone who can balance between being able to relate to the students with being in control of the classroom. In addition, Skinner and Belmont (1993) found that teachers responded more positively to students who were engaged, suggesting a reciprocal effect in student engagement. This was reflected in our participants' observations that when students perceive their teachers as disengaged, they tend to be become disengaged themselves. These findings suggest

that without a teacher who values the purpose of the PTP/L course as an opportunity to build relationships with students, the PTP/L course may not be successful in meeting its goal.

Although the importance of relationships to program effectiveness has been demonstrated (Anderson et al., 2004), relationship-building is not prioritized nor explicitly built into the program implementation. Given the central role that teachers play in school connectedness, creating opportunities to strengthen teacher-student relationships may enhance positive educational and health outcomes, especially for students who may have a history of negative experiences and relationships within the school. Mayeda, Chesney-Lind, and Koo (2001) found that the perceived lack of interest in school among Pacific Islanders is a pervasive stereotype that may be internalized by Pacific Islander students, which may diminish their overall sense of school connectedness. A quantitative component of this course evaluation found that Pacific Islander students reported having a significantly higher sense of school connectedness at the end of the PTP/L course compared to students of all other major ethnic groups in the school (Chung-Do, Goebert, Chang, & Hamagani, 2011). Pacific Islander youth are at higher risk for low educational outcomes and tend to be less engaged in school (Mayeda, Okamoto, & Mark, 2005). Thus, the PTP/L course may provide opportunities for all students to build positive relationships with their teachers that may serve as a platform to meet the other objectives of the PTP/L course.

One objective of the PTP/L course is to increase students' involvement in school-related activities. Students reported that their relationships with their teachers were essential in influencing their decision to become more involved in school and extracurricular activities. Students expressed that teachers' suggestions were not taken seriously if they did not have a close connection with their teachers. Because student involvement in school activities is generally linked to school success (Appleton, Christenson, & Furlong, 2008; Jennings, 2003), more systematic and concerted efforts should be made by PTP/L teachers to encourage students to get involved and participate in school and extracurricular activities. Appleton et al. (2008) found that the impact of student involvement is exponential, with greater impacts on students' academic achievement at higher levels of participation than lower levels. Providing incentives for

teachers to also actively participate in the activities alongside the students (Kailua High School's Community Service Day is an example of such activity) may be especially effective in not only encouraging student involvement but also in building closer connections between students and teachers (CDC, 2009a). These activities may provide opportunities for informal social interactions, which can enhance adult-youth relationships (Grossman & Bulle, 2006). Shernoff and Vandell (2007) found that a combination of adult and peer involvement in activities results in peak engagement and intrinsic motivation among youth, further highlighting the importance of promoting teacher and staff involvement in student activities.

Another objective of the PTP/L course is to guide students in developing their preparedness for their post-high school plans. Students expressed appreciation for the PTP/L course as an opportunity to hear and learn about their teachers' experiences, which guided them to think more carefully and thoroughly about their plans after high school. The students perceived that the course helped them increase their awareness of various options for their future plans, which motivated them to do well in school to reach those goals. Enhancing academic motivation and achievement among youth is found to play an important role in positive youth development with effects that go beyond educational outcomes. For example, Karen, Cohen, and Brooks (1998) found that having high academic achievement and aspirations are protective for all outcomes that were assessed in their longitudinal study, including adolescent pregnancy, engaging in criminal activities, criminal conviction, antisocial personality disorder, and alcohol abuse. This relationship was independent of age, gender, intelligence quotient, socioeconomic status, childhood conduct problems, and peer influence. Ryan (1995) asserts that students are motivated to learn when three core needs are fulfilled: competence, autonomy, and relatedness. These needs can be targeted through relationships and participation in the school context (Jennings, 2003). For example, academic competence can be developed through relationships with teachers and school staff, which provide opportunities to build socio-emotional skills and reinforce positive norms. Through adult support of school activities, students have the opportunity to commit to and pursue academic and educational goals, which can foster their sense of autonomy. Students are also more likely to engage in learning when they feel connected to others who they find relatable.

30

Faircloth (2009) found that students responded well to interactive assignments, such as those that allow them to make connections with their own experiences. They enjoyed telling their stories and relating to stories of others, which parallels the findings of our study. The students in our study expressed appreciation for teachers who were willing to share their stories of high school and their path through life, which allowed them to connect to their teachers on a personal level, thus making them more relatable. Students shared that their teachers' willingness to share their stories also helped enhance their level of academic motivation. Lee (2007) contends that students' learning experiences must be bridged with the experiences, values, and resources that youth bring to school. Thus, designing lessons so they are more relatable to students and incorporating group activities may promote interactions within the class. This is aligned with one of the recommendations of the CDC that calls for the use of more experiential activities and efforts to personalize lessons as a way to enhance students' sense of school connectedness (CDC, 2009a).

Another CDC-recommended strategy for enhancing school connectedness is to provide professional development and support for teachers to meet the diverse cognitive, emotional, and social needs of youth (CDC, 2009a). One concrete method to achieve this is to "enable teachers to learn from each other by building learning teams" to exchange classroom management and group facilitation techniques (CDC, 2009a, p. 14). This idea has been suggested by teachers who were interviewed as a part of the PTP/L course evaluation (Chung-Do et al., 2010). To achieve this, continual support for teachers should be provided by organizing collaborative workshops or trainings on methods and strategies for mentoring, facilitating discussions, and college and career guidance (Martin & Dowson, 2009). This may also help motivate teachers and clarify the purpose of each lesson, which may enhance students' level of motivation and belief in the importance of the course. Because teachers were reported as being the source of emotional and personal support for some of these students, supplementary trainings in meeting the social and emotional needs of adolescent youth may also be beneficial.

Several limitations exist in this study. Because we did not audiotape the focus groups, some details shared during the discussion may have been missed. However, the presence of two facilitators helped capture details that one facilitator may have missed. In

addition, facilitators were university staff rather than teachers, which may have encouraged the students to honestly express their opinions. Focus groups were conducted during the lunch period, which provided only 30 minutes to gather students' thoughts. This limited opportunities to ask for specific examples and in-depth details. The total participation rate of 25% was relatively low. Some students may have been reluctant to attend the informational meeting because of the fear that they were being punished. A handful of students who attended the meeting asked if they were in trouble despite the note assuring them that they were randomly selected for a voluntary study. Several students informed us that they lost the parent permission form and asked if they could participate without it. Thus, the requirement to return a signed parent permission form may have possibly posed a challenge to student participation (Esbensen, Miller, Taylor, He, & Freng, 1999). In addition, some students may have been hesitant give up their lunch period to socialize with their friends. However, the chi-square analysis revealed that there were no statistically significant differences in demographic variables of the participants compared to the student body, suggesting that these students' perceptions may be representative of the student body.

Overall, the findings from this study suggest that the PTP/L course may be a promising strategy to enhance the students' sense of school connectedness and wellness. The PTP/L course is an innovative way that Kailua High School has implemented the Hawai'i State BOE Personal Transition Plan requirement by folding in the goal of enhancing students' sense of school connectedness. Although mounting evidence supports the beneficial effect of school connectedness, practical applications and examples to enhance school connectedness have been limited, especially at the high school level. Kailua High School's PTP/L course is one example of a school-wide strategy aimed to increase school connectedness that may be a promising model for other high schools in Hawai'i who need to meet the statewide Personal Transition Plan requirement. By structuring the course to support relationship-building, these relationships can serve as a foundation to enhance positive youth outcomes by motivating students to do better in school, get involved in extracurricular activities, and plan for the future. Although not all schools may have the resources to implement a program like Kailua High School's PTP/L course, the findings of this study may be helpful in other

efforts to enhance school connectedness. Schools can support these efforts by providing professional development opportunities for teachers to enhance their capacity to increase the relevancy of lessons and facilitate interactive discussions and relationship-building activities. The findings of this study also support the need for high schools to structure their classes and activities to provide more opportunities for personal connections to be made among the students and the school staff. Because of the increasing evidence supporting the importance of school connectedness for healthy youth development, more efforts should be made to create strategies that promote school connectedness.

CHAPTER 3. EXAMINING THE PSYCHOMETRIC PROPERTIES OF A COMPREHENSIVE SCHOOL CONNECTEDNESS SCALE

Abstract

Increasing evidence shows that school connectedness is important to youth wellness. However, considerable inconsistency in the concepts and measures of school connectedness exists across studies. In addition, many measures do not capture the multifaceted dimensions of the school connectedness construct. This study examined the psychometric properties of a school connectedness scale that aimed to comprehensively measure key constructs of school connectedness. The scale was tested with an ethnically diverse sample of 727 high school students. Confirmatory factor analyses demonstrated the association of the 15 items with the five factors identified in the literature--school involvement, academic motivation, school attachment, teacher support, and peer relations (χ^2=439.99 [df=83], p<.0001, CFI= .991, TLI=.988, RMSEA=.077). Cronbach's coefficient alphas for the factors ranged from .73-.93. Although further tests need to be conducted to confirm its validity and reliability, this newly developed scale may provide researchers a tool to comprehensively measure school connectedness for program evaluation.

Introduction

Research consistently shows that youth who have a strong sense of school connectedness tend to have positive educational and developmental outcomes (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Klem & Connell, 2004; McNeely & Falci, 2004). These studies integrate various child and adolescent development theories, such as the Attachment Theory and the Theory of Social Control (Catalano et al., 2004). The Attachment Theory contends a primary caregiver who is sensitive and responsive to the needs of the youth is essential for healthy social and emotional development to occur (Bowlby, 1969). Although attachment formation is most sensitive early in a child's life, influential attachments can develop well into adolescence and adulthood. It is now well-known that the presence of at least one caring adult in a youth's life enhances his or her ability to withstand negative influences, including poverty, parental addiction, family mental illness, and family discord (Center for Substance Abuse Prevention, 2000; Rak & Patterson, 1996; Werner, 1984). The school represents an important area where attachment among youth and school staff can be created and strengthened to enhance positive development and buffer negative experiences for youth.

The Theory of Social Control expands on the Attachment Theory. The Theory of Social Control proposes that once strong social attachments are established, they exert an informal control on people's behavior (Gottfredson & Hirschi, 1990). Therefore, social values and beliefs that drive behaviors are internalized through attachments and relationships that are formed throughout youth's lives. The Social Development Model builds on Theories of Attachment and Social Control by describing a process through which youth involvement leads to bonding, thereby shaping their beliefs in the social group's values (Catalano & Hawkins, 1996). These beliefs mediate the behavioral outcomes of the youth by encouraging behaviors that conform to the group's norms and inhibiting those that deviate.

Educational and public health research findings strongly support these theories, highlighting the importance of school connectedness in the healthy emotional and cognitive development of youth. Resnick et al. (1997) was one of the first research teams to define and measure school connectedness through the National Longitudinal Study of Adolescent Health (Add Health Survey). This seminal study found that students' sense of

school connectedness was one of the strongest protective factors of youth high-risk behaviors, such as substance use, violence, and suicidal attempts. Since then, school connectedness has gained recognition as an important protective factor for positive youth development. In 2003, the Centers for Disease Control and Prevention (CDC) Division of Adolescent and School Health and The Johnson Foundation sponsored the Wingspread Conference that brought together key educational and health researchers and representatives to review existing studies on school connectedness (CDC, 2009a).

Youth who feel a strong sense of connection to their schools tend to have high grades and positive educational outcomes (Martin & Dowson, 2009; McNeely & Falci, 2004). For example, participating in extracurricular activities is related to a decrease in the rate of school dropout, particularly during the early years of high school and for high-risk youth (Mahoney, Cairns, & Farmer, 2003; McNeal, 1995). Jennings (2003) found that school involvement and supportive relationships were positively related to grade point averages (GPAs). Those who lack a strong sense of school connectedness often experience academic problems, which are considered to be a gateway to delinquency and risky behaviors (Catalano, Loeber, & McKinney, 1999).

Having a strong sense of school connectedness is not only linked to positive educational outcomes, but is also a protective factor against health risk behaviors (Catalano et al., 2004; Klem & Connell, 2004; McNeely & Falci, 2004). For example, youth with a strong sense of school connectedness are less likely to have problems with substance use, early sexual initiation, and interpersonal violence (Resnick et al., 1997; Jenkins, 1997; Johnson, 2009). Strong teacher support can prevent youth from experimenting with drugs, alcohol and sexual activity (McNeely & Falci, 2004). Voelkl and Frone (2000) also found that students' lack of identification with school is significantly related to both alcohol and marijuana use. Moreover, participation in extracurricular activities, a measure of school connectedness, is related to lower rates of criminal offending (Mahoney, 1997). School connectedness can also have effects beyond the individual behaviors. Buckley, Sheehan, and Chapman (2009) found that school connectedness is more predictive than parent connectedness in students' willingness to intervene if their friends are engaging in risky behaviors. Given the importance of the

role of school connectedness on youth well-being, accurately measuring school connectedness is imperative.

Despite the growing research on school connectedness, the concepts and measures of school connectedness are inconsistently utilized across studies (Appleton, Christenson, & Furlong, 2008; Johnson, 2009; Whitlock, 2006). To add to the confusion, the term "school connectedness" is often used synonymously and interchangeably with other terms, such as *school engagement*, *school bonding, school attachment, school involvement* and *school commitment* (Libbey, 2004; Sharkey, You, & Schnoebelen, 2008). Although the use of terms is often inconsistent and unclear, most researchers agree that school connectedness is a multidimensional construct that consists of indicators related to students' internal processes as well as external observable behaviors (Appleton et al., 2008; Marks, 2000; O'Farrell & Morrison, 2003; Reschly & Christenson, 2006). A comprehensive construct of school connectedness includes *behavioral* (e.g., participation in activities and attendance), *affective* (e.g., students' sense of attachment to the school and feelings toward their relationships to peers and teachers), and *cognitive* (e.g., how much students value learning and relevance of schoolwork for future endeavors) dimensions (Fredericks et al., 2004; Jimerson, Campos, & Greif, 2003).

However, many school connectedness studies do not provide an explicit definition of the term (Jimerson et al., 2003). In the cases when researchers actually do provide a clear definition of school connectedness, the definitions often only capture the affective aspects of school connectedness. For example, the CDC (2009a) defines school connectedness as the "belief by students that adults in the school care about their learning as well as about them as individuals (p. 3)." Bonny, Britto, Klostermann, Hornung, and Slap (2000) provide a similar definition by conceptualizing school connectedness as the feeling of closeness to school staff and the school environment. Whitlock (2006) defines school connectedness as a "psychological state of attachment in which individual youth perceive that they and other youth are cared for, trusted, and respected by collections of adults that they believe hold the power to make institutional and policy decisions" (p. 15). While these definitions have contributed to the school connectedness literature, they do not fully capture the multifaceted nature of the school connectedness construct.

Similarly, existing measures of school connectedness are neither consistently utilized nor capture the full dimensions of the school connectedness construct. A review of 25 school connectedness studies conducted by Johnson (2009) revealed that various constructs of school connectedness were used across the studies, which included peer relations, teacher support, academic success, classroom and school culture, perceptions of safety and physical disorder. Libbey's (2004) review found a similar pattern, stating that "even within the same dataset [school connectedness] is measured by different scales with different names" (p. 281). Moreover, some studies use a single question to measure school connectedness, such as "How do you feel about your school?" (e.g., Thomas & Smith, 2004). One of the most widely used scales is the School Connectedness Scale that was adapted from the Add Health Survey. Although this scale has been shown to have good internal consistency and validity (Anderman, 2002; Furlong, O'Brennan, & You, in press), it is often utilized inconsistently across studies. The original scale in the Add Health Survey contained six items, whereas other studies have used anywhere from five to eight items in their studies (Bonny et al., 2000; Jacobson & Rowe, 1999; McNeely, 2005; Ozer, 2005). While it is widely used, this scale measures only affective components of school connectedness, such as students' feelings toward their relationship to their teachers, without assessing the behavioral and cognitive components (Anderman, 2002; Libbey 2004; Sharkey, You, & Schnoebelen, 2008).

To develop a comprehensive scale that captures the multidimensionality of the school connectedness construct, this study aimed to examine the psychometric properties of a newly developed school connectedness scale. Confirmatory factor analysis was utilized to assess its potential use in future school connectedness studies.

Methods

Participants

The sample for this study was drawn from a public high school located on the island of O'ahu in Hawai'i. The student population is largely comprised of Native Hawaiian and Asian students (Hawai'i State Department of Education School Status Improvement Report, 2010). Nearly half of the students receive free or reduced-cost lunch, which is an indicator of the low socioeconomic status. To qualify, students must be from families with annual gross household incomes of less than $26,567 for two

people, $33,338 for three people, $40,109 for four people, and $46,880 for five people (Hawaiʻi Department of Human Services Benefit, n.d.). All students at the school are required to register and participate in a weekly class designed to help them transition through high school, provide college and career guidance, and develop leadership skills. Class sizes are purposefully kept small, with 10-15 students in each class, to facilitate a mentoring relationship between the teacher and students. Students remain with the same teacher and classmates throughout their entire time at the school (9th-12th grade) to develop consistent and positive relationships.

Measures

A team of university research staff and high school teachers developed a three-page survey to evaluate the course (see Appendix D for a sample of the survey). To create a school connectedness scale, a literature review was first conducted to gather questions from various existing scales. These questions were then shared with teachers who identified and adapted the questions to fit the needs of the course and the students, which resulted in 17 quantitative items that measure school connectedness (see Appendix E). A total of five subscales were created based on the face validity of the 17 items, which the teachers felt were important factors to measure for the course evaluation. These subscales fit within Jimerson et al.'s (2003) framework of school connectedness by addressing behavioral, cognitive, and affective components of school connectedness (Table 3.1).

Table 3.1. Description of School Connectedness Scale

Jimerson et al.'s (2003) framework	Components in School Connectedness Scale	Item	Statements
Behavioral	school involvement INVOLVE	1	This course has encouraged me to get involved in school-related activities.
		2	This course has encouraged me to attend school-related events.
		3	This course has helped me get to know people at the school that I may not have otherwise met or gotten to know
Cognitive	academic motivation ACADEMIC	4	This course has helped me understand the importance of my grades.
		5	This course has motivated me to do better in my classes.
		6	This course had helped me understand the importance of education.
Affective	school attachment ATTACH	7	This course has contributed to making me feel like I am part of this school.
		8	This course has made me feel unhappy to be at school. (reverse-coded)
		9	This course has made me want to give back to our school.
	teacher support TEACHER	10	I feel connected with my teacher.
		11	I can talk to my teacher if I have a problem or need advice.
		12	My teacher makes the lessons interesting and meaningful.
		13	My teacher treats me unfairly. (reverse-coded)
		14	My teacher has high expectations of me.
	peer relations PEER	15	I feel connected with the students in my class.
		16	Students in my class respectfully listen to each other during class discussions.
		17	This course has helped me to get along with others.

All items were measured with a 5-point Likert scale (1=*strongly disagree, 5=strongly agree*).

All quantitative items on the survey were measured with a 5-point Likert scale (1=*strongly disagree, 5= strongly agree*). The survey also included 25 questions related to the students' perceptions of the course and the knowledge gained throughout the course, which were not included in the analyses for this study. Four demographic questions were also asked of the students: *1) What is your sex?; 2) Which of the following [ethnicity] do you most strongly identify with?(from a list of 14 possible ethnic groups); 3) Do you qualify to get free or reduced-cost lunch?;* and *4) On average, what were your grades on your last report card?* Sex was coded as boy=0, girl=1. Ethnicity was grouped into six racial/ethnic categories that were dummy coded into a categorical variable:

Native Hawaiian (defined as indigenous people of Hawai'i), Pacific Islander (defined as immigrant and migrant Pacific Islanders including Samoans, Tongans, Micronesians, etc), Filipino, Japanese, White, and Other (including Black/African American, Portuguese, Puerto Rican, Latino, Chinese, Other Asian, and Other). Students who chose more than one ethnicity were categorized as Native Hawaiian if Hawaiian was one of the options chosen. Students who chose another ethnicity with White were classified as the other ethnicity. For example, students who chose White and Japanese were classified as Japanese. This ethnicity coding schema is consistent with the coding schema of the Hawai'i Health Survey (Westat, 2006). Socioeconomic status was coded so students who qualify for free or reduced-cost lunch=1, and those who do not qualify=0. Self-reported GPA was calculated by coding an A or A- average as 4, B+ to B- average as 3, C+ to C- average as 2, and D or less average as 1. Grade level was determined by school records and coded as an ordinal variable.

Procedures

The survey was distributed and administered on the last day of the school year in the Spring of 2010. Students were informed that the survey is voluntary and confidential. Each student's survey contained an ID code to protect his or her confidentiality. Students were instructed to place their completed surveys in a common manila envelope to further ensure confidentiality. Because seniors ended their school year earlier than the lower grades, seniors received the survey one week before the rest of the students. The survey took approximately 30 minutes to complete. This study was approved by the University of Hawai'i Institutional Review Board.

Data Analysis

Surveys were electronically scanned using Teleform 10.2 software package and the data were transported into SPSS 18.0 for initial cleaning and preliminary analysis. Chi-square was conducted to assess the representativeness of the sample by comparing the participants' demographic variables (sex, GPA, ethnicity, and socioeconomic status) to the student body. The demographic information of the student body was obtained from de-identified school records and the annual school report (Hawai'i State Department of Education School Status and Improvement Report, 2010). The 17 school connectedness items were coded so higher scores reflect a stronger sense of school connectedness. Data

41

were first examined by comparing the correlations among the 17 school connectedness items. Items that possessed weak correlations ($r=.3$ or less) were noted. The data were further analyzed using SAS 9.2 and Mplus 5.2 software programs (Muthén & Muthén, 2006) to conduct confirmatory factor analyses to test the fit of the proposed factor structure (Figure 3.1). To account for data skewness, variables were computed as categorical variables and correlated errors between items were accounted for (Bollen, 2000; Gerbing & Anderson, 1984). Items were removed from the model if the factor loadings were lower than .50 in the one-factor solution. Cases with missing data were imputed using Mplus.

Figure 3.1 displays the theoretical model that was tested. All models were first tested as a first-order model that assumed that all items contributed to the total score. Models were further tested as a second-order model to confirm the dimensions among the items. To test the validity of the imputation assumptions (Rubin, 1976), goodness-of-fit indices (GFI) of the imputed data were compared with complete cases. Several GFI were used to assess the overall model fit. The Comparative Fit Index (CFI) was used to compare the ability of a model to replicate the variance-covariance matrix compared to no model at all (Jöreskog & Sörbom, 1984). The CFI values range from zero to one, with values greater than .90 considered as a good fit. The Tucker-Lewis Index (TLI) is a non-normed fit index that allows for a penalty for adding parameters. Similar to CFI, TLI values of greater than .90 are considered to indicate a good fit (Tucker & Lewis, 1973). The root mean square error of approximation (RMSEA) is a measure of discrepancy of the model to population covariance matrix per degree of freedom (Steiger, 1998; Steiger & Lind, 1980). Thus, RMSEA was regarded as a badness of fit to the asymptotic population covariance. A well-fitting model should have an RMSEA value that approaches zero (perfect approximation), though a value of .08 or less indicates a reasonable fit (Byrne, 1998; Hu & Bentler, 1999; Steiger, 1998; Steiger & Lind, 1980). Cronbach alpha was examined for each of the five factors in the final model to assess internal consistency. Concurrent validity was determined by examining the mean correlations among the five factors.
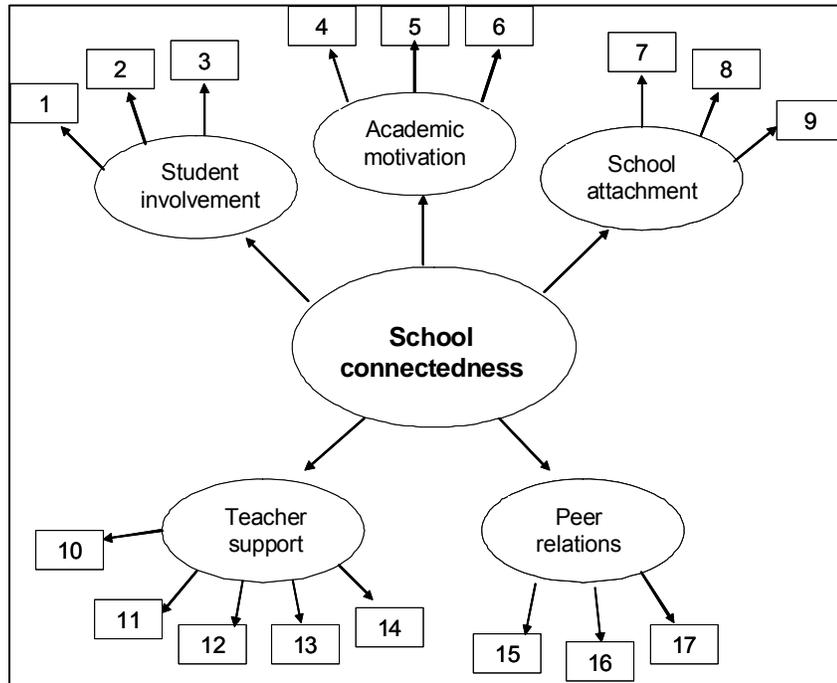
Figure 3.1. Proposed Theoretical Model of the School Connectedness Scale

Results

Participant Description

Of the 916 students at the school, 749 (82%) students completed the survey. Because some items were reverse-coded to ensure students were accurately reading the survey questions, 32 surveys were disqualified because these students marked all one answer (i.e., marked all "strongly disagree") or created obvious design patterns with their answers (i.e., consecutively and repeatedly marked "strongly disagree," "disagree," "neutral," "agree," "strongly agree") throughout the entire survey. This resulted in a total of 717 surveys that were used in the following analyses. Males represented 51.6% of the participants. Approximately 46% participants identified themselves as Native Hawaiian, 14% as Filipino, 13% as White, 11% as Japanese/Okinawan, 7% as Pacific Islanders, with other ethnicities each accounting for less than 3% of the sample. Out of 602 students, half of the participants reported that they qualified to receive free or reduced-school lunch. About 46% of the sample reported having GPAs of B. The sample included 22% 9th graders, 27% 10th graders, 25% 11th graders, and 26% 12th graders. Statistically significant differences were found in ethnicity ($\chi^2 = 67.25$ [$df = 5$], $p < .0001$) and GPA

(χ^2=399.78 [df= 3], p<.0001) between study participants and the student body of the school. There were less Native Hawaiian students and more Filipino, Japanese, White, and Pacific Islander students in the sample compared to the ethnic composition of the student body. The overall self-reported GPA of the sample was higher than the GPA of the student body. There were no statistical differences in sex and socioeconomic status between the sample and the student body.

Bivariate Analysis

Correlations among the 17 school connectedness items are displayed in Table 3.2. Feeling happy to be at school and being treated fairly by their teacher had the weakest correlations across all items (r<.03), with the exception of the correlation with one another. The correlations among the rest of the items were moderately or highly correlated with correlation coefficients ranging from r=.36 to .83. All correlations were positive, suggesting that the more students are involved in school-related activities and events, the more likely they will be academically motivated (i.e., understand the importance of grades). Similarly, students who have a strong sense of attachment to their school (i.e., feel like they are a part of the school) feel connected to their teachers and classmates.

Table 3.2. Correlation Matrix for Items on School Connectedness Scale

	SCHOOL INVOLVEMENT			ACADEMIC MOTIVATION			SCHOOL ATTACHMENT			TEACHER SUPPORT					PEER RELATIONS		
Items	1 activity	2 events	3 people	4 grades	5 classes	6 educa	7 school	8 unhappy	9 give	10 connect	11 advice	12 lessons	13 unfair	14 expectati	15 connect	16 listen	17 get along
1	1																
2	.71****	1															
3	.57****	.62****	1														
4	.63****	.60****	.58****	1													
5	.65****	.65****	.60****	.82****	1												
6	.62****	.64****	.59****	.80****	.83****	1											
7	.62****	.62****	.64****	.66****	.69****	.71****	1										
8	.21****	.22****	.19****	.31****	.26****	.28****	.27****	1									
9	.51****	.52****	.46****	.45****	.50****	.47****	.58****	.13***	1								
10	.47****	.51****	.47****	.50****	.52****	.53****	.51****	.19****	.52****	1							
11	.42****	.46****	.44****	.46****	.52****	.49****	.50****	.18****	.48****	.77****	1						
12	.48****	.48****	.45****	.49****	.53****	.52****	.49****	.14****	.42****	.67****	.63****	1					
13	.07	.09*	.10**	.20****	.16****	.17****	.11**	.45****	.01	.23****	.25****	.14***	1				
14	.36****	.41****	.36****	.43****	.43****	.41****	.40****	.11**	.36****	.51****	.52****	.42****	.18****	1			
15	.41****	.41****	.42****	.46****	.42****	.43****	.43****	.19****	.41****	.48****	.46****	.42****	.11**	.50****	1		
16	.42****	.41****	.40****	.44****	.43****	.42****	.45****	.16****	.40****	.49****	.48****	.47****	.13***	.43****	.70****	1	
17	.55****	.55****	.57****	.59****	.62****	.58****	.63****	.24****	.53****	.59****	.56****	.58****	.13***	.50****	.66****	.67****	1

* $p<.05$; ** $p<.01$; *** $p<.001$; **** $p<.0001$

Confirmatory Factor Analysis

Table 3.3 provides the results of the various models tested with confirmatory factor analyses. The following models were tested with all surveys, including those with blank items. The two items related to feeling happy to be at school and being treated fairly by their teacher were removed from the final tested models. These items were weakly correlated to almost all other items and had significantly lower factor loadings than all other items (less than .50). A one-factor model of school connectedness was tested, which had an inadequate RMSEA (χ^2=777.73 [*df*= 90], *p*<.0001, CFI= .982, TLI=.979, RMSEA=.103). A three-factor model was tested as a first-order model, grouped by the three components posited by Jimerson's et al. (2003) framework (χ^2=647.80 [*df*=86], *p*<.0001, CFI=.985, TLI=.981, RMSEA=.095). A second-order model was also tested by including the latent construct of school connectedness, which did not change the fit. A five-factor first-order model provided a better fit (χ^2=368.75 [*df*=77], *p*<.0001, CFI= .992, TLI=.989, RMSEA=.073). This five-factor model was further tested as a second order model (χ^2=439.99 [*df*=83], *p*<.0001, CFI= .991, TLI=.988, RMSEA=.077), which also provided a good fit. The standardized coefficients of this model are displayed in Figure 3.2. The five factor second-order model was also tested with complete cases and was found to have a similar fit as the model tested with all cases (χ^2=435.19 [*df*=83], *p*<.0001, CFI= .990, TLI=.988, RMSEA=.079), indicating that the imputation assumptions are valid.

Table 3.3. Goodness-of-Fit Indices for Tested School Connectedness Scale Models

Tested Models	χ^2	*df*	*p*	CFI	TLI	RMSEA
One-factor model	777.73	90	<.0001	.982	.979	.103
Three-factor model-first and second order	647.80	86	<.0001	.985	.981	.095
Five-factor model-first order	368.75	77	<.0001	.992	.989	.073
Five-factor model-second order	439.99	83	<.0001	.991	.988	.077
Five-factor model with complete cases only	435.19	83	<.0001	.990	.988	.079

CFI-Comparative Fit Index; TLI-The Tucker-Lewis index; RMSEA-Root Mean Square Error of Approximation
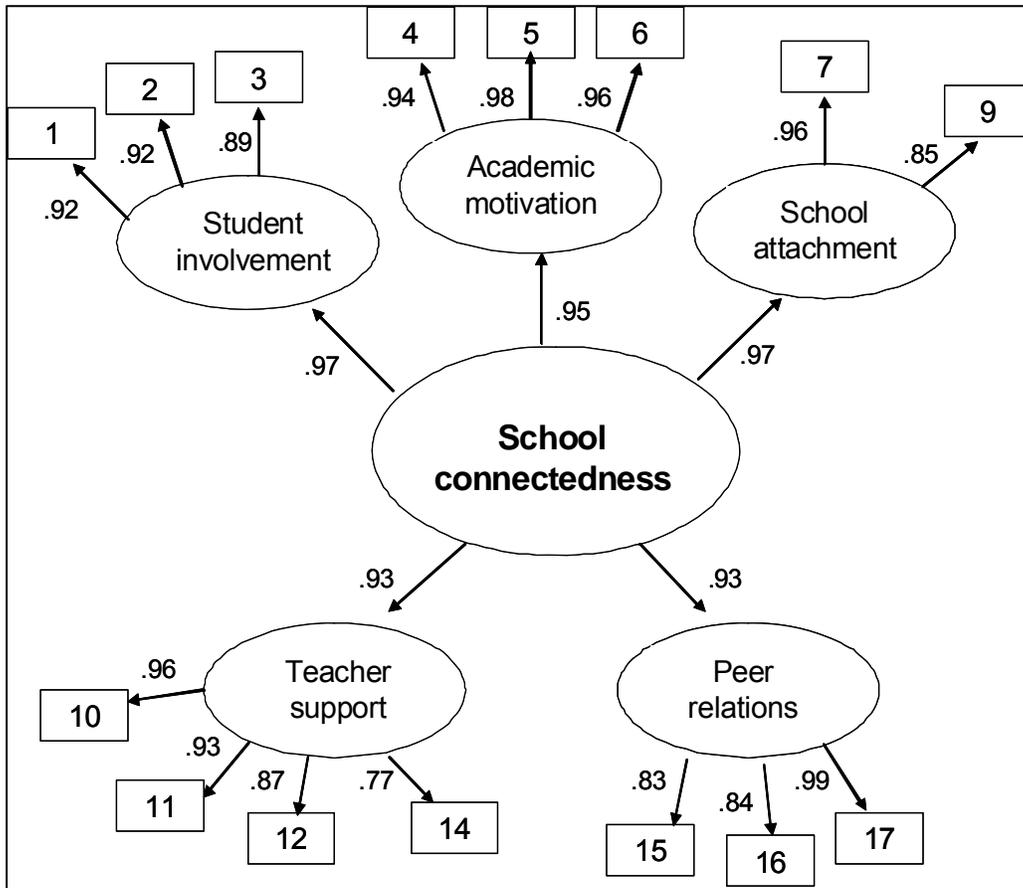
χ^2=439.99 [*df*=83], *p*<.0001, CFI= .991, TLI=.988, RMSEA=.077

Figure 3.2. Standardized Coefficients of the Five Factor Model of the School Connectedness Scale

Reliability and Validity

The correlations among the five factors were in the moderate to high range (r=.60-.76; see Table 3.4). This suggests that these five dimensions are measuring distinctly different indicators that conceptually overlap, which provides evidence for the convergent validity of the scale (Trochim, 2006). Estimates of the internal consistency of the school connectedness scale were calculated using the Cronbach's coefficient alpha. All scales had good internal consistency with coefficient alphas ranging from α = .73-.93 (Nunnally, 1978; see Table 3.4).

Table 3.4. Correlation Matrix for Five Factors of the Final School Connectedness Scale and Cronbach Alpha of Each Factor

Factors	School Involvement	Academic Motivation	School Attachment	Teacher Support	Peer Relations	Cronbach Alpha (α)
School Involvement	1					.84
Academic Motivation	.76	1				.93
School Attachment	.73	.70	1			.73
Teacher Support	.61	.62	.62	1		.85
Peer Relations	.59	.59	.60	.67	1	.86

All correlations are significant at $p<.0001$

Discussion

The results of this study support the concept of school connectedness as a multidimensional construct. The factor analyses confirmed the association of the 15 items with the five hypothesized factors of school involvement, academic motivation, school attachment, teacher support, and peer relations. Many studies use scales that assess only one of these factors to measure what is labeled as school connectedness, which fails to recognize the multifaceted nature of the school connectedness construct (Appleton et al., 2008; Furlong et al., 2003). This newly developed scale provides researchers with a valid and reliable instrument to more accurately and comprehensively measure school connectedness. In addition, the number of items in the scale is manageable, which minimizes the possibility of participant burn-out, especially with youth. Moreover, this scale was also developed in partnership with teachers who have practical and extensive experience working with a variety of students.

One of the limitations of this study is that the wording of the survey questions was constructed to be specific to the course. Therefore, an application of the measure as an overall school connectedness scale would require rewording and more testing. Chi-square analysis revealed that the sample may be biased with more students who are academically engaged. Students who are chronically absent or truant may not have been present on the day of the survey administration. Students who may have difficulty reading or maintaining attention for a long period of time may have been less likely to complete the

survey. Therefore, the resulting sample may be biased toward the students with higher levels of school connectedness. The findings of this study are also limited to students from one high school in a specific region of the United States. Therefore, this scale needs to be validated with youth in other schools and areas to conduct multi-group comparisons. However, the diversity of the student sample of this study is a promising start to test the psychometric properties of this scale.

Additional tests of validity and reliability, such a test-retest reliability method, should be conducted to assess the stability of the school connectedness measure. To further validate the scale, the relationship between students' school connectedness measured with this scale and their educational and health outcomes should be examined. Additionally, studies should be conducted in order to understand if the various dimensions of school connectedness have differential effects on youth outcomes. For example, McNeely and Falci (2004) found that students who reported high levels of teacher support were less likely to engage in risky health behaviors, such as substance use, suicidal attempts, sexual activity, and weapon-related violence. However, feeling part of school and enjoying school did not necessarily prevent students from initiating these risky behaviors. Skinner and Belmont (1993) also found that teacher involvement is critical to students' sense of school connectedness, which emphasize the importance of the roles of teachers. Parental connectedness may also have interactional effects with school connectedness on youth outcomes (Brookmeyer, Fanti, & Henrich, 2006). Therefore, future studies should examine school connectedness that includes the perspectives and influences of teachers and parents.

Schools can provide a supportive environment for youth wellness, especially for those who are labeled as at-risk or lack familial support. Sharkey et al. (2008) found that school assets may have a greater impact on internal resilience for youth with low family assets. Therefore, enhancing school connectedness among students can potentially alter the trajectory of youth who may be on a negative path. Moreover, enhancing school connectedness does not only benefit at-risk youth, but can also have positive impact for all youth. Longitudinal studies have demonstrated that when students feel connected to their schools, violent behaviors and mental health symptoms decrease over time for all students (Brookmeyer et al., 2006; Borowsky, Ireland, & Resnick 2002; Shochet, 2006).

School connectedness is a modifiable factor, which gives hope for building resiliency among all youth. Therefore, more effort should be made to integrate school-wide strategies to enhance school connectedness. For example, McNeely, Nonnemaker, and Blum (2002) found that smaller school size and a positive classroom management climate were associated with high levels of school connectedness, while zero-tolerance disciplinary policies were related to lower sense of school connectedness among students. These school-level factors can be integrated in policy-making decisions of school administrators to promote school connectedness. Because of the increasing evidence supporting the importance of the role of school connectedness for healthy youth development, schools and youth programs should make a concerted effort toward promoting this protective factor. This newly developed scale can help in this effort by accurately and comprehensively capturing the multiple factors of school connectedness to create effective programs that enhance the educational and developmental outcomes of youth.

CHAPTER 4. THE IMPACT OF A COURSE AIMED AT STRENGTHENING SCHOOL CONNECTEDNESS AND ITS ASSOCIATION WITH VIOLENT ATTITUDES AND BEHAVIORS

Abstract

Interpersonal youth violence is a growing public health concern in the United States. Having a high sense of school connectedness has been found to be a protective factor for interpersonal youth violence. A course that aims to enhance school connectedness was developed and evaluated through a high school-university partnership. This study aimed to investigate the impact of the course on students' sense of school connectedness and its association with violent attitudes and behaviors. Survey data from 598 high school students were analyzed to assess their level of school connectedness. Violent attitudes and behaviors were measured in a separate survey with a scale adapted from the CDC Compendium. Analysis of Variance (ANOVA) was used to identify differences in the school connectedness and violence scores related to students' demographic characteristics. The role of school connectedness in the relationship between student demographic characteristics and violent attitudes and behaviors was examined with structural equation modeling. Overall, students reported a moderately high sense of school connectedness. School connectedness was found to be negatively associated with violent attitudes but not self-reported violent behaviors. The relationship between school connectedness and violence was independent of student demographic characteristics. These results suggest that the course may be an effective strategy in enhancing students' sense of school connectedness. Incorporating components of youth violence prevention into the course may help produce a greater impact on violent attitudes and behaviors.

Introduction

Interpersonal youth violence is a growing public health concern in the United States (US). According to the Centers for Disease Control and Prevention (CDC), homicide is the second leading cause of death for youth between the ages of 10 and 24 (CDC, 2010b). In 2008, almost 700,000 youth were treated in emergency departments for injuries resulting from violence. In addition to physical injuries, both victims and perpetrators of youth violence are at an increased risk for engaging in other risky behaviors, such as substance abuse and sexual activities, and for experiencing depression and posttraumatic stress disorder (Danielson et al., 2006). Youth violence also affects school and community wellness by compromising the learning environment, increasing health care costs, decreasing property value, and disrupting social services (CDC, 2010b).

Although much of the youth violence research has focused primarily on physical violence, emotional violence has also been shown to have detrimental effects on youth wellness (Williams, Fredland, Han, Campbell, & Kub, 2009). Emotional violence includes verbal threats, taunts, and the use of intimidation, humiliation, or fear to cause psychological harm. Victims of emotional violence are at risk for poor academic engagement, low self-esteem, social anxiety, and psychosomatic symptoms (Nansel et al. 2001; Wilkins-Shurmer et al., 2003). Moreover, the experiences of victimization may have a cumulative and lasting impact on health outcomes well into adulthood, with recent studies finding that those who have been victimized during their childhood and adolescence are more likely to develop chronic diseases (Alison, Roeger, & Reinfield-Kirkman, 2009). Also, with the growing popularity of cellular phones and online social websites among youth, cyberbullying has become a recent concern. Cyberbullying is generally defined as using electronic media, such as email, cell phones, instant messaging, text messaging, and social websites, to threaten or harm others (Kiriakidis & Kavoura, 2010). As computers and cell phones become more accessible to youth, research suggests that as much as 49% of youth are involved in cyberbullying (Raskaukas & Stoltz, 2007). Effects of cyberbullying may be more devastating than traditional forms of youth violence because perpetrators are able to continue harassing their victims without being physically present (Kiriakidis & Kavoura, 2010).

Approximately 15.5 million Asians and Pacific Islanders live in the US, comprising about 5% of the total US population (Office of Minority Health, 2009). The relatively low proportion of people that fall under the Asian and Pacific Islander label in the US population has limited attention to and research with these groups. However, Hawai'i's population includes a much larger proportion of Asians and Pacific Islanders compared to the rest of the US, with Asians and Pacific Islanders accounting for two-thirds of the state population (US Census Bureau, 2010). Ensuring the healthy development of youth and reducing their risks for unhealthy behaviors are concerns among Hawai'i's schools and communities. According to the 2009 Hawai'i Youth Risk Behavior Survey, 1 in 3 youth has been in a physical fight in the last year (Hawai'i State Department of Health, 2010b). In addition, cyberbullying seems to be on a rise with about 32% of Hawai'i's students reporting that they have been hurt by having mean things said to them via the Internet or email in 2009, which is an increase from 24% reported in 2007 (Hawai'i State Department of Health, 2010a). Goebert , Else, Matsu, Chung-Do, and Chang (2010) found that cyberbullying victimization increased the likelihood of substance use, depression, and suicide attempts with a multiethnic sample in Hawai'i.

Links between youth violence and demographic characteristics of youth, such as sex, ethnicity, socioeconomic status, academic achievement, and grade level, have been well-established (Herrenkohl et al., 2000; Rudatsikira, Muula, & Siziya, 2008). For example, males are more likely to engage in violence than females (CDC, 2010c; Grunbaum et al., 2003). Ethnic minority youth, including specific subgroups in the Asian and Pacific Islander category, are more likely to experience violence than white youth (CDC, 2010c; Mayeda, Hishinuma, Nishimura, Garcia-Santiago, & Mark, 2006). Native Hawaiians and Pacific Islanders report higher rates of deviant and violent behaviors (Mayeda et al., 2006; Rudatsikira, Muula, & Siziya, 2008). Youth from low socioeconomic backgrounds, who tend to face multiple life stressors, are more likely to be exposed to and engage in violence (Aisenberg & Herrenkohl, 2008). Low academic performance, measured with test scores and Grade Point Averages (GPAs), is also predictive of violence (Rodney, Johnson, & Srivastava, 2005; Wegner, Garcia-Santiago, Nishimura, & Hishinuma, 2010). In high school, 9th graders are more likely to engage in

violent behaviors than students of higher grades. According to the national 2007 Youth Risk Behavior Survey, 41% of 9th graders have been involved in physical fights compared to 36% of 10th, 35% of 11th, and 28% of 12th graders (CDC, 2010a). These findings demonstrate the need for more research to examine how demographic and social characteristics of youth interplay with risk and protective factors. Until recently, research on protective factors has been minimal, with most of the attention being on risk factors. This has led to a call for more researchers and practitioners to consider protective factors and recognize existing assets and resources within individuals and communities (Israel et al., 2003). This paradigm shift has encouraged researchers to identify, incorporate, and promote existing protective factors in order to foster healthy behaviors and communities.

Feeling connected to school, which is generally characterized as "school connectedness," has been consistently shown to be a protective factor in the healthy development of youth by preventing youth violence (Catalano, Haggerty, Oseterle, Fleming, & Hawkins, 2004; CDC, 2009a; Klem & Connell, 2004; McNeely & Falci, 2004). Youth with a strong sense of school connectedness are less likely to engage in interpersonal violence in and away from the school setting, including physical fighting, hitting, shoving, stabbing, shooting someone, threatening someone with a weapon, and carrying a weapon (Catalano et al., 2004; Johnson, 2009; Resnick et al., 1997). Generally, participation in extracurricular activities, which is one of the indicators of school connectedness, is related to lower rates of criminal activities (Mahoney, 1997). To better delineate causation, Borowsky, Ireland, and Resnick (2002) found that both boys and girls who scored high on a measure of school connectedness at the beginning of the year were involved in fewer incidences of violence during the school year, especially for those who had a history of grade repetition. Given the importance of school connectedness on youth violence prevention, more efforts should be made towards developing and evaluating programs that enhance youth's sense of school connectedness to prevent and reduce their violence risks.

This study is part of an evaluation of an intervention to increase feelings of school connectedness at a public high school in Hawai'i. All students are required to enroll every year in this year-long course. The weekly lessons are designed for students to explore various career and college options, build leadership skills through service

activities, and develop their sense of school connectedness in developmentally appropriate ways from 9th to 12th grade. Lessons for underclassmen (9th and 10th graders) focus on increasing students' interactions with their classmates, teachers, and school staff through service learning and team-building activities. These lessons encourage students to find their niche at the school and participate in school-related activities. Lessons for upperclassmen (11th and 12th graders) are intended to motivate students to reflect on their educational and career aspirations and build skills and products (such as résumés) that will be useful for their post-high school plans. Because positive relationships with an adult enhances youth resilience (Center for Substance Abuse Prevention, 2000; Rak & Patterson, 1996), class sizes are purposefully kept small (10-15 students) to facilitate a mentoring relationship between the teacher and students. Students also remain with the same teacher and classmates throughout their time at the school to develop personal and consistent relationships to foster their sense of school connectedness (Black, 2000; Reynolds, Barnhart, & Martin, 1999).

This study aimed to investigate the level of students' sense of school connectedness at the end of the course. The association of school connectedness with violent attitudes and behaviors was also examined using structural equation modeling (SEM). Based on previous research, we hypothesized that high levels of school connectedness would be related to lower scores on violent attitudes and behaviors.

Methods

Participants

The course evaluation survey was administered at the end of the 2009-2010 school year to the entire student body. Of 899 students enrolled in the course, 749 (83%) completed the survey. Because some items were reverse-coded to ensure students were accurately reading the statements, 32 surveys were excluded from analysis because the student marked one answer throughout the survey (e.g., marked all "strongly disagree") or created obvious design patterns (e.g., consecutively and repeatedly marked "strongly disagree," "disagree," "neutral," "agree," "strongly agree"). This resulted in a total 717 valid surveys. To measure the students' violent attitudes and behaviors, a school-wide student wellness survey also was administered at the end of the 2009-2010 school year

55

and linked to the course evaluation survey using student IDs. Out of 717 students, 598 (83%) students completed both surveys, which were used for the following analyses.

Measures

Demographic Variables

Four demographic questions were asked to collect information on students' sex, ethnicity, socioeconomic status, and academic standing: 1) *What is your sex?; 2) Which of the following [ethnicity] do you most strongly identify with?(from a list of 14 possible ethnic groups); 3) Do you qualify to get free or reduced-cost lunch?;* and *4) On average, what were your grades on your last report card?* Sex was coded as boy=0, girl=1. Ethnicity was grouped into six racial/ethnic categories and dummy coded into categorical variables: Native Hawaiian (defined as indigenous people of Hawaiʻi), Pacific Islander (defined as immigrant and migrant Pacific Islanders including Samoans, Tongans, Micronesians, etc), Filipino, Japanese, White, and Other (including Black/African American, Portuguese, Puerto Rican, Latino, Chinese, Other Asian, and Other). A total of 33 students chose more than one ethnicity. Students who chose more than one ethnicity were categorized as Native Hawaiian if Hawaiian was one of the options chosen. Students who chose another ethnicity with White were classified as the other ethnicity. For example, students who chose White and Japanese were classified as Japanese. This ethnicity coding schema is consistent with the coding schema of the Hawaiʻi Health Survey (Westat, 2006). Socioeconomic status was coded so students who qualify for free or reduced-cost lunch=1, and those who do not qualify=0. Self-reported GPA was calculated by coding an A or A- average as 4, B+ to B- average as 3, C+ to C- average as 2, and D or less average as 1. Grade level was determined by school records and coded as an ordinal variable.

School Connectedness

The course evaluation survey measured school connectedness using a comprehensive five-factor scale developed by a team of university and school staff members who adapted existing school connectedness scales (McNeely & Falci, 2004; Rodney et al. 2005; Yamauchi et al., 2006) to fit the needs of the course evaluation. This scale has 15 items assessing five indicators of school connectedness, including academic motivation, school attachment, school involvement, teacher support, and peer relations.

This scale has found to be psychometrically sound, with a Cronbach alpha of .94 (Chung-Do, Goebert, & Chang, 2011; see scale in Appendix E). The correlations among the five factors were in the moderate to high range (r=.60-.76), suggesting that each factor measures a distinctly different factor that conceptually overlap, which provides evidence for the convergent validity of the scale (Trochim, 2006). Confirmatory factor analysis suggests that a five-factor model provided the best fit (χ^2=439.99 [df=83], p<.0001, CFI= .991, TLI=.988, RMSEA=.077). Given that baseline data on students' level of school connectedness was not collected at the beginning of the school year, items were worded to assess how well the course was responsible for feelings of school connectedness at the end of the school year (e.g., *"This course has encouraged me to get involved in school-related activities"* and *"This course has contributed to making me feel like I am part of this school"*). All items were measured with a 5-point Likert scale (1=*strongly disagree,* 5= *strongly agree*). A composite score was created by calculating the mean of the 15 items.

Violence Attitudes and Behaviors

The student wellness survey included 12 items measuring violent attitudes and behaviors, which were adapted from the violence items in the CDC Compendium (Dahlberg, Toal, Swahn, & Behrens, 2005) (see Table 4.3). Four indicators of violence were 1) violent attitudes; 2) physical violence; 3) emotional violence; and 4) cyberbullying. All indicators were measured with a 4-point Likert scale (1=*strongly disagree,* 4= *strongly agree*). Violent attitudes were measured with three items (e.g., *"It's okay to hit someone who hits you first")* (α=.70). Physical violence was measured with three items (e.g., *"In the past year, I pushed shoved, or hit a student"*) (α=.69). Four items measured emotional violence (e.g., *"In the past year, I have spread rumors, gossip, or talked smack about someone"*) (α=.76), and cyberbullying was measured with two items (e.g., *"In the past year, I sent someone an embarrassing, threatening, mean, or insulting message on a cell phone/email/instant message."*) (α=.84). Composite scores were created by calculating the mean for each of the four violence indicators.

Procedures

Scannable course evaluations and student wellness surveys were administered to all students in May 2010. Each student was assigned an ID code for confidentiality and to link the data from the two surveys. Surveys were administered on different days by school teachers, who were provided written instructions. University staff members were available throughout the survey administration to help answer questions. Students were reminded that answers were confidential and would not affect their grades. To protect confidentiality, a cover sheet with the student's name was attached to the front of his/her survey so the teachers could distribute the surveys accordingly. Teachers instructed all students to remove the cover sheet before completing the survey. The coversheets were collected separately from the surveys and destroyed. Therefore, the survey tools only included the student ID codes but not names. The course evaluation survey took approximately 30 minutes, and the student wellness survey took approximately an hour to complete. University staff members collected surveys from each classroom immediately after the class period. The University of Hawai'i Institutional Review Board approved this study.

Data Analysis

Surveys were scanned and data imported into SAS 9.2 for cleaning and coding. Chi-square was conducted to assess the representativeness of the sample by comparing the participants' demographic variables (sex, GPA, ethnicity, and socioeconomic status) to the student body. The demographic information of the student body was obtained from de-identified school records and the annual school report (Hawai'i State Department of Education School Status and Improvement Report, 2010). Data were coded so higher scores reflected a strong sense of school connectedness and high levels of violent attitudes and behaviors. The violence-related items on the school wellness survey were rescaled so that they followed a 5-point (rather than a 4-point) Likert scale to be comparable to the 5-point school connectedness score. Analysis of Variance (ANOVA) was conducted to assess for any sex, ethnic, socioeconomic, GPA and grade-level differences in the mean scores of school connectedness and the four indicators of violence.

MPlus 5.2 (Muthén & Muthén, 2006) was utilized to examine the measurement and structural equation models. To account for the skewness in the data, each school connectedness and violence variable was computed as a categorical variable with five response options. Confirmatory factor analysis (CFA) was performed on the violence variables to examine the fit of the measurement model. Missing data were minimal (<3%), and multilevel multiple imputation was used to impute sets of missing values (Schaefer, 2001) to ensure that complete data sequences were available for all cases (Allison, 2002). The imputed values were bounded to the valid ranges of the data, which allowed all imputed dichotomous variables to range between 0 and 1 rather than rounding values (Allison, 2005). Utilizing SEM, partial and full mediation models of school connectedness were assessed to examine the strength of associations of the students' demographic characteristics, school connectedness, and violence outcomes. A direct effect model was also tested to assess the relationships of students' demographic characteristics and school connectedness with the violence outcomes.

The following Goodness-of-Fit (GFI) indices were used to compare the fit of the three tested models. The Comparative Fit Index (CFI) was used to compare the ability of a model to replicate the variance-covariance matrix compared to no model at all (Jöreskog & Sörbom, 1984). The CFI values range from zero to one, with models with values greater than .90 considered to be a good fit. The Tucker-Lewis Index (TLI) is a non-normed fit index that allows for a penalty for adding parameters. Similar to CFI, TLI values of greater than .90 are considered to indicate a good fit (Tucker & Lewis, 1973). The root mean square error of approximation (RMSEA) is a fit index focusing on the estimated population fit. A well-fitting model should have a value approaching zero, with a value of .08 or less indicating an adequate fit. Weighted Least Square Means and Variance (WLSMV) estimation was used in all analyses to account for categorical variables within a limited sample size.

Results

Participant Description

Demographic characteristics of the participants are shown in Table 4.1. Females represented slightly more of the sample (51%). Nearly 44% of the participants reported their ethnic identity as Native Hawaiian, 16% as Filipino, 14% as White, 11% as

Japanese, 8% as Other, and 7% as Pacific Islanders. Slightly less than half of the participants reported that they qualified to receive free or reduced-school lunch, which is an indicator of lower socioeconomic status. Approximately 47% of the sample reported that their GPA on their last report card was a B average. The sample included 135 9th graders, 158 10th graders, 151 11th graders, and 154 12th graders. Statistically significant differences were found in ethnicity (χ^2=70.12 [df= 5], p<.0001) and GPA (χ^2=423.59 [df= 3], p<.0001) between the study participants and the student body of the school. There were less Native Hawaiian students and more Filipino, Japanese, White, and Pacific Islander students in the sample compared to the ethnic composition of the student body. The overall self-reported GPA of the sample was higher than the GPA of the student body. There were no statistical differences in sex and socioeconomic status between the sample and the student body.

Table 4.1. Participant Characteristics (N = 598)

Variables	n (%)
Sex	
Male	289 (49.3)
Female	297 (50.7)
Ethnicity	
Native Hawaiian	254 (43.5)
Filipino	96 (16.4)
White	80 (13.7)
Japanese	63 (10.8)
Other	48 (8.2)
Pacific Islanders	43 (7.4)
Free or reduced-cost lunch	
No	262 (52.1)
Yes	241 (47.9)
Grade Point Average	
A	143 (26.3)
B	253 (46.5)
C	131 (24.1)
D or less	17 (3.1)
Grade Level	
9th	135 (22.6)
10th	158 (26.4)
11th	151 (25.3)
12th	154 (25.8)

The mean school connectedness score for the entire sample was 3.42 (SD = .72) on a 5-point Likert scale. Table 4.2 displays the mean scores of school connectedness and violence by students' demographic characteristics. Statistically significant differences were found by ethnicity and grade level with school connectedness. Pacific Islanders had the highest mean score for school connectedness at the end of the course, followed by Filipinos and Native Hawaiians, while Whites reported the lowest. Students in 11th and 10th grades had higher scores of school connectedness compared to students in 9th grade, with 12th graders reporting the lowest.

Students' mean scores for the four violence indicators significantly differed by demographic characteristics. Males were more likely to report higher levels of physical, emotional, and cyber violent behaviors and hold violent attitudes compared to females. Native Hawaiians and Pacific Islanders were more likely than other ethnicities to report physical violent behaviors and violent attitudes, with Japanese students reporting the lowest levels. Students who reported that they qualify for free or reduced-cost school lunch also reported higher levels of physical violent behaviors and violent attitudes compared to those who do not qualify. The lower the students' self-reported GPAs, the more likely they were to report violent attitudes. Students who reported GPAs of C or lower were more likely to engage in physically violent behaviors compared to those who had B or higher. Students who reported GPAs of D or lower were more likely to engage in cyberbullying than those who reported C or higher averages. Although 9th graders reported the highest level of violence across all four violence indicators, the differences were not statistically significant.

Table 4.2. Descriptive Data of School Connectedness and Violence Outcomes by Participant Characteristics (N = 598)

Variables	School connectedness Mean (SD)	Attitudes Toward Violence Mean (SD)	Physical Violence Mean (SD)	Emotional Violence Mean (SD)	Cyber Bullying Mean (SD)
Sex	NS	$F(1, 557)=27.6$ $p<.0001$ Male > Female	$F(1, 583)=16.8$ $p<.0001$ Male > Female	$F(1, 549)=20.9$ $p<.0001$ Male > Female	$F(1, 548)=22.8$ $p<.0001$ Male > Female
Male	3.38 (.76)	3.21 (1.00)	2.18 (1.21)	2.84 (1.02)	2.24 (1.10)
Female	3.47 (.68)	2.76 (1.01)	1.79 (1.04)	2.45 (.96)	1.82 (.97)
Ethnicity	$F(5, 578)=5.9$ $p<.0001$ PI > FIL, HI > Other, JPN > WT	$F(5, 549)=4.9$ $p=.0002$ PI, HI > WT, FIL, Other > JPN	$F(5, 577)=4.7$ $p=.0003$ HI, PI > WT, FIL, Other > JPN	NS	NS
Hawaiian (HI)	3.47 (.73)	3.15 (1.02)	2.22 (1.33)	2.69 (1.09)	2.13 (1.17)
Filipino (FIL)	3.50 (.65)	2.82 (1.01)	1.83 (1.08)	2.54 (.83)	1.88 (.96)
White (WT)	3.14 (.68)	2.92 (1.01)	2.00 (1.10)	2.76 (1.04)	2.14 (1.05)
Japanese (JPN)	3.27 (.68)	2.57 (.91)	1.53 (.52)	2.39 (.79)	1.81 (.75)
Pacific Islanders (PI)	3.78 (.66)	3.24 (1.07)	2.10 (1.13)	2.88 (1.14)	2.08 (1.19)
Other	3.31 (.84)	2.77 (1.06)	1.80 (.90)	2.71 (1.03)	1.99 (1.06)
Free or reduced-cost lunch	NS	$F(1, 475)=23.6$ $p<.0001$ Yes > No	$F(1, 500)=11.3$ $p=.0008$ Yes > No	NS	NS
Yes	3.50 (.71)	3.22 (1.07)	2.17 (1.28)	2.70 (1.09)	2.12 (1.19)
No	3.38 (.69)	2.77 (.95)	1.82 (1.04)	2.62 (.95)	1.97 (.97)
Grade Point Average	NS	$F(3, 513)=10.6$ $p<.0001$ D > C > B > A	$F(3, 539)=10.4$ $p<.0001$ D, C > B, A	NS	$F(3, 505)=6.8$ $p=.0002$ D > C, B, A
A	3.44 (.77)	2.62 (1.07)	1.75 (1.02)	2.56 (.97)	1.81 (1.03)
B	3.49 (.68)	3.02 (.95)	1.87 (1.01)	2.68 (.97)	2.03 (.96)
C	3.33 (.74)	3.15 (1.02)	2.36 (1.37)	2.70 (1.12)	2.15 (1.22)
D or less	3.18 (.83)	3.78 (.93)	2.73 (1.46)	3.30 (1.05)	3.00 (1.24)
Grade level	$F(3, 594)=4.2$ $p=.0057$ 11,10 > 9 > 12	NS	NS	NS	NS
9th	3.34 (.68)	3.20 (1.05)	2.17 (1.20)	2.79 (1.03)	2.24 (1.18)
10th	3.51 (.78)	2.94 (1.05)	1.88 (1.14)	2.59 (.98)	2.02 (.99)
11th	3.53 (.64)	2.96 (1.00)	1.98 (1.12)	2.71 (1.02)	1.99 (1.01)
12th	3.29 (.75)	2.88 (1.02)	1.96 (1.16)	2.53 (1.03)	1.93 (1.10)

All scores are on a scale of 1-5, with 5 indicating the highest level of school connectedness and violence; NS=not significant (p>0.05)

Measurement Model

CFAs were conducted to assess the model fit of the four violence indicators: 1) physical violence; 2) emotional violence; 3) cyberbullying; and 4) violent attitudes. The first CFA assessed the fit of the four indicators as a single latent variable for all four latent variables, which provided a mediocre fit (χ^2=142.7 [df=23], p<.0001, CFI=.963; TLI=.981, RMSEA=.093). The standardized factor loadings were .59 for violent attitudes, .85 for physical violence, 1.00 for emotional violence, and .90 for cyberbullying. The second CFA assessed the fit of the violence measures as four separate latent variables, which improved the model fit (χ^2=105.5 [df=23], p<.0001, CFI=.975; TLI=.987, RMSEA=.077). Therefore, the four indicators of violence were entered into the structural model as four separate factors. Table 4.3 displays the standardized factor loadings for the four violence indicators.

Table 4.3. Standardized Factor Coefficients of Violence Measures

Items	Factor Loadings
Attitudes Toward Violence	
If a kid teases me or "disses" me, I usually cannot get them to stop unless I hit them.	.90
It's okay to hit someone who hits your first.	.57
Sometimes violence is the only way to express your feelings.	.92
Physical Violence	
In the past 30 days, I was in a physical fight.	.52
In the past 30 days, I was in a physical fight on school property.	.50
In the past year, I pushed shoved, or hit a student.	.94
Emotional Violence	
In the past year, I have spread rumors, gossip, or talked smack about someone.	.60
In the past year, I have put down another student.	.68
In the past year, I have tried to hook up with another person's boyfriend/girlfriend.	.79
In the past year, I have made a sexual comment, joke, or gesture to someone.	.73
Cyberbullying	
In the past year, I sent someone an embarrassing, threatening, mean or insulting message on a cell phone/email/instant message.	.94
In the past year, I posted embarrassing, threatening, mean or insulting information about someone on a website.	.88

GFI: χ^2=105.5 [df=23], p<.0001, CFI=.975; TLI=.987, RMSEA=.077; All items significant at p<.001

Structural Equation Model

Three structural models were tested to examine the role of school connectedness in the relationship between students' demographic characteristics and violent attitudes and behaviors. School connectedness was tested as a partial and full mediator of this relationship. It was also tested as a direct contributor to the four violence indicators. The GFI for the three structural models tested are presented in Table 4.4. The partial mediation model adequately fit the data (χ^2=344.2 [df=94], p<.0001, CFI=.957; TLI=.980, RMSEA=.078). Higher level of school connectedness was associated with being a Pacific Islander, while other ethnicities had no statistical significance. There were no other single demographic variable that significantly contributed to school connectedness more than others. Demographic characteristics of students had varying effects on the four measures of violence. Being qualified for free or reduced-cost lunch was a significant contributor to violent attitudes. Grade level was negatively related to physical violence and cyberbullying. Self-reported GPA was negatively related to violent attitudes, physical violence, and cyberbullying. Being a Pacific Islander was positively associated with physical violence. Being male was a significant contributor to all four violence indicators. Although school connectedness was not significantly related to violent behaviors, it was a statistically significant negative contributor to violent attitudes, accounting for 22% of the variance.

Table 4.4. Goodness-of-Fit Indices for Tested Models

Tested Models	χ^2	df	p	CFI	TLI	RMSEA
Partial mediation	344.2	94	.0001	.957	.980	.078
Full mediation	334.3	85	.0001	.958	.978	.081
Direct effect	168.9	54	.0001	.980	.984	.069

CFI=Comparative Fit Index; TLI=The Tucker-Lewis index; RMSEA=Root Mean Square Error of Approximation

The full mediation model also had an adequate fit (χ^2=334.3 [df=85], p<.0001, CFI=.958; TLI=.978, RMSEA=.081). The relationship between school connectedness and violent attitudes and being a Pacific Islander was maintained. The direct effect model

was also assessed with school connectedness and demographic variables each directly influencing violent attitudes and behaviors, which provided the best fit (χ^2=168.9 [df=54], p<.0001, CFI=.980; TLI=.984, RMSEA=.069). School connectedness continued to significantly contribute to violent attitudes, and all associations between demographic variables and the four violence indicators were maintained. The standardized path coefficients in the direct effect model are shown in Table 4.5. The direct effect model is presented in Figure 4.1, which illustrates the statistically significant associations of school connectedness and students' demographic characteristics with the four violence indicators.

Table 4.5. Standardized Path Coefficients of Direct Effects Model of School Connectedness and Demographics Characteristics Predicting Youth Violence.

Variables	Attitudes	Physical	Emotional	Cyber
Sex	-.30***	-.22***	-.24***	-.23***
Ethnicity-Pacific Islander	.05	.15**	.04	.06
Socioeconomic Status	.17**	.09	.05	.05
Grade Point Average	-.17**	-.10*	-.05	-.12*
Grade Level	-.10	-.10*	-.08	-.13*
School connectedness	-.11*	.02	.05	.02

GFI: χ^2=168.9 [df=54], p<.0001, CFI=.980; TLI=.984, RMSEA=.069; *p<.05, **p<.01, ***p<.001
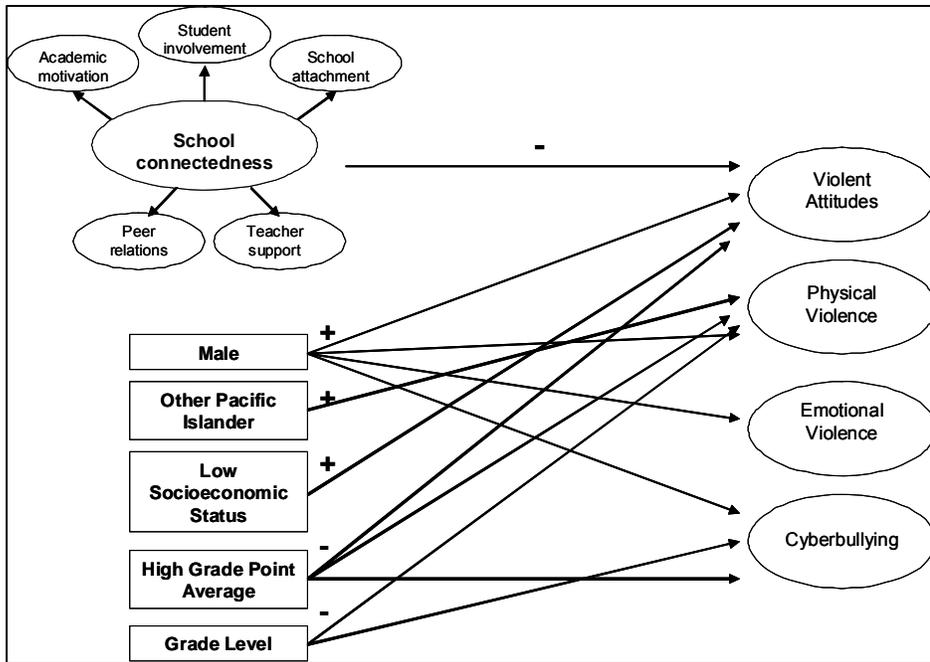
Figure 4.1. Structural Equation Model for Statistically Significant Associations of Students' Demographic Characteristics and School Connectedness with Violence Indicators.

Discussion

This study evaluated the impact of a mandatory high school course on the students' sense of school connectedness and its association with violent attitudes and behaviors in a sample of largely Asian and Pacific Islander students. With a mean school connectedness score of 3.42 (with 1 being the lowest and 5 being the highest score) for the overall sample, the results suggest that the course is contributing to the students' sense of school connectedness. In examining the role of school connectedness in the relationship between student demographic characteristics and violent attitudes and behaviors, the direct effect model was found to have the best fit. School connectedness was not found to be a mediator of student characteristics and violence indicators. Instead, school connectedness demonstrated an independent protective effect on violent attitudes. In other words, students with a stronger sense of school connectedness were less likely to hold attitudes that condone violence regardless of their demographic characteristics. Henrich, Brookmeyer, and Shahar (2005) also found direct protective effects of school connectedness on weapon violence.

These findings suggest that promoting school connectedness may benefit youth of various demographic characteristics regarding their violent attitudes. However, the relationship between school connectedness and violent attitudes was modest with a standardized path coefficient of -.11. School connectedness was also not significantly related to violent behaviors, which conflicts with findings of prior studies. One explanation may be because the goals of this course do not explicitly include prevention and reduction of violence. Consequently, none of the lessons overtly focus on violence prevention. Integrating components of violence prevention strategies into the course curriculum may make a more significant impact on violent outcomes.

Behavioral change is the ultimate goal of public health interventions. Because this course is relatively new, the school connectedness developed in the course may have yet to influence the students' behaviors. Theories of behavior change, such as Theory of Reasoned Action and the Health Belief Model, assert that attitudes and social normative perceptions are predictors of behaviors (Glanz, Rimer, & Lewis, 2002). Therefore, the modest association between attitudes and school connectedness may be reflective of the intermediary effects of the course. On the other hand, attitudes do not always predict behavior, especially when situational pressures are present (Gleitman, Fridlund, & Reisberg, 1999). For example, students who hold non-violent attitudes may behave violently if their family member is being threatened (Adler, 2008). Because cognitive-dissonance theory holds that behaviors can also lead to attitudinal changes (Festinger, Riecken, & Schachterm, 1956), students who are involved in a violent incident may adjust their attitudes to justify their actions. Longitudinal studies may shed more light on the intermediary and long-term effects of the course.

Behavioral change requires multi-pronged strategies that take contextual factors into consideration, such as acculturation and socioeconomic issues (Goebert et al., 2010; Umemoto et al., 2009). The CDC encourages practitioners to employ strategies across multiple domains of the social ecological model to guide youth violence prevention efforts (CDC, 2009b). This model considers the complex interplay between individual, relational, communal, and societal factors that shape people's behavior. Along with integrating violence prevention components into the course, involving parents and

community members in the effort to enhance the students' sense of school connectedness may help promote behavioral change.

Despite the small sample size, Pacific Islanders (not including Native Hawaiians) reported the highest level of school connectedness out of all ethnic groups in the sample, suggesting that the course is especially effective for Pacific Islander students who often report facing educational and social challenges. In Hawaiʻi, many Pacific Islanders (not including Native Hawaiians) are most likely recent immigrants and migrants from islands that comprise Samoa, Tonga Guam, the Marianas, the Marshalls, Micronesia, and Palau. As they adapt to life in the US, many face cultural and linguistic barriers in multiple settings, including the school environment. Mayeda, Chesney-Lind, and Koo (2001) found that the perceived lack of school connectedness among Pacific Islander students (including Native Hawaiians) is a pervasive stereotype that exists in school settings. Pacific Islander students' negative experiences with teachers and school staff can lead to the internalization of these stereotypes, which may diminish their overall sense of school connectedness.

Given that Pacific Islanders are underrepresented in the higher education system compared to other major ethnic groups in Hawaiʻi (Mayeda, Okamoto, & Mark, 2005), more attention should be paid to enhancing educational outcomes for Pacific Islander students. Relationship-building may be an important component to the learning styles of Pacific Islander youth (Scull, n.d.). Qualitative evaluation of this course conducted with students also revealed that the quality of the teacher-student relationships created through the course is vital to its success (Chung-Do et al., 2010). Providing Pacific Islanders opportunities to build positive relationships with teachers may help to create positive experiences at school. Further studies should be conducted to assess the long-term impact of the course, especially on Pacific Islander students.

Although being Pacific Islander continued to be positively linked to school connectedness in the SEM, it was also positively related to physical violence. It is likely that other existing risk factors may outweigh the positive effects of school connectedness for Pacific Islander youth. Pacific Islanders are more likely to be living below the poverty level and underrepresented in the higher education system compared to other major ethnic groups in Hawaiʻi (Mayeda et al., 2006). They are also underrepresented in higher-

paying managerial and professional jobs and overrepresented in lower-paying farming, cleaning, and blue-collar jobs (Okamura, 2008). Because most of the jobs available to these families are low-waged, parents are often forced to work multiple jobs, which can compromise their ability to provide emotional support and adequate supervision for their children (Mayeda et al., 2005). In addition, immigrant children tend to acculturate to the host culture much more quickly than their parents and often report feeling conflicted between their desire to be accepted by the dominant culture and wanting to please their parents who may hold traditional values and expectations (Mayeda, Pasko, & Chesney-Lind, 2006). This type of familial strain and intergenerational conflict may lead to feelings of distress, anxiety, alienation, and guilt, which can lead to problems in mental health and social adjustment among these youth (Ho, Yeh, McCabe, & Hough, 2007; Ying & Han, 2006).

Grade level differences were also found in levels of school connectedness, with 12th graders reporting the lowest score. Whitlock's (2006) mixed-methods study also found a similar "connectedness slump" among the seniors in her sample, with only 19% of seniors reporting feeling academically engaged. Whitlock (2006) suggested that this "senior slump" may be partly explained by the unfulfilled developmental needs of seniors who wished for more opportunities for meaningful input in their school policies and procedures. Focus groups conducted as a part of the overall evaluation of the course revealed similar findings (Chung-Do et al., 2010). The 2009-2010 school year was the first year that the products of the course, such as a resume and personal statement, were made mandatory requirements for graduation. This requirement seemed to have caused anxiety and frustration among seniors who did not feel included in the development of this policy. Thus, these perceptions may have negatively impacted the seniors' general feelings toward the course. In addition, the lessons during senior year are geared towards their transition out of high school and are less focused on building school connectedness. Although studies suggest that school connectedness decreases as grade level increases (Bond et al., 2007; Marks, 2000; Whitlock, 2006), the grade level pattern found in this study conflicted with the general trend found in the literature. The 10th and 11th graders in this study reported higher levels of school connectedness compared to 9th graders. This may be reflective of the duration of the course. In other words, school connectedness may

increase as students spend more time with their class throughout their time in the high school. Longitudinal evaluation efforts may be able to shed more light on this grade level pattern that is unique to the course.

The association of student demographic variables with violence outcomes in this study was similar to patterns found in the broader youth violence literature. Sex differences were clearly demonstrated, with males having higher scores across all four violence measures, which also corroborate findings from other studies with Asian and Pacific Islander samples (Hishinuma et al., 2005). This relationship was maintained in the SEM. This finding raises the question of whether youth violence prevention programs targeted specifically at males should be developed. Boys are less likely to be connected to school and are at more risk of engaging in risky behaviors, such as substance use and violence (Appleton , Christenson, & Furlong, 2008; Resnick et al., 1997). Although not statistically significant, males reported lower levels of school connectedness compared to females in our sample. Academic standing, measured with self-reported GPA, was also negatively associated with all measures of violence except emotional violence. This is reflective of findings from Wegner et al. (2010) where school achievement was one of the strongest protective factors for violence among Asian and Pacific Islander youth. They also found that having college aspirations and favorable attitudes toward school were protective of youth violence, which are major goals of this course. Thus, efforts should be made to continue to strengthen and evaluate this course as a strategy to prevent and reduce youth violence by enhancing the students' educational achievement and school connectedness.

Although not statistically significant, there was a general trend with 9th graders reporting the highest scores for all four measures, which is reflective of national and local trends of violence in high school. In Hawai'i, 12.3% of 9th graders reported fighting on school property versus 9.7% of 10th and 11th graders and 7.1% of 12th graders (Hawai'i Department of Health, 2010b). The transition from middle school to high school is a stressful, yet critical, period for youth as they face a larger and more diverse student body, teachers, and staff and are expected to behave more responsibly but independently (Kipke, 1999). For example, more students fail in 9th grade than any other grades in high school. Therefore, many students are held back in 9th grade, creating a "ninth grade

bulge" that many schools experience across the country (National High School Center, n. d.). In the last 30 years, this bulge has more than tripled from 4% to 13%, meaning 13% of 9th graders are being held back (Haney et al., 2004). Moreover, up to 20% of 9th graders end up dropping out of school entirely (Wheelock & Miao, 2005).

We found that Native Hawaiians and other Pacific Islanders reported the highest levels of physical violence and violent attitudes compared to all other ethnic groups in our sample. Studies that disaggregate the Asian and Pacific Islander population have found racial/ethnic disparities similar to our study. A national study of the 2005 Youth Risk Behavior Survey found that Native Hawaiian and other Pacific Islander youth are more likely to fight on school property than youth of other ethnicities (Rudatsikira et al., 2008). In Hawai'i-based research, Mayeda et al. (2006) found that Native Hawaiian and Samoan youth reported higher rates of overall deviant behavior (e.g., violence, delinquency, property offense, and substance use) compared to youth of other ethnicities. This highlights the value of disaggregating the Asian and Pacific Islander category to uncover potential disparities among Asian and Pacific Islander subgroups (Le, 2002).

Further research is needed to determine the relationship between school connectedness and violence for the ethnic groups that are included in the Asian and Pacific Islander category. The focus on Asians and Pacific Islanders is important because they are among the fastest growing minority groups in the US and are projected to reach 20 million by 2020. By 2050, approximately one out of every 10 Americans will be of Asian and/or Pacific Islander descent (US Office of Human Resources, 2008). Therefore, it is imperative to develop a better understanding of the experiences of youth violence among the Asian and Pacific Islander population and identify protective factors that can be strengthened. Additional data, such as actual GPA, actual school involvement, and college attendance can also help shed light on the impacts of the course.

Limitations of this study include the sole reliance on the self-report survey. Although using direct observation of the classroom would be beneficial in gaining a more complete picture of the interactions that are occurring in the classroom to assess school connectedness (Fraser, 1998), the survey methodology is advantageous because it captures data that an observer could miss or consider unimportant. In addition, allowing the students' to self-report on their perceptions and experience is beneficial because they

have encountered many learning environments to form accurate impressions. Moreover, ensuring confidentiality during survey administration can improve self-report accuracy, especially when measuring delinquent behaviors among youth (WestEd, 2010). Chi-square analysis revealed sample bias with less Native Hawaiian student and students with higher GPA in the sample compared to the student body. Students who are chronically absent or truant may have been less likely to complete the surveys as well as students who have difficulty reading or maintaining attention for a long period of time. In addition, the data were cross-sectional, which limits the ability to discern causation. Future studies should collect baseline scores of violence and school connectedness at the beginning of the school year to be compared to the scores at the end of the school year to assess the impacts of the course with more certainty. In addition, the possibility of the ceiling effect may have impacted the results. In other words, the course may have limited impacts on students with already high levels of school connectedness. Since the baseline scores were not collected, we could not account for maturation effects. Recruiting another school to serve as a comparison group would also strengthen the findings of the evaluation. Because the findings of this study are limited to students from one high school in a specific region of the US, more evaluations of school connectedness interventions should be conducted.

This study is one of the few studies that focused on an intervention with an understudied population of Asian and Pacific Islander youth. The findings of this study may help create and strengthen effective youth violence prevention programs. Because changing attitudes and behaviors takes time, the future evaluation of this course may shed additional light on the role that school connectedness plays in youth outcomes. These efforts may inform schools and policymakers on strategies that enhance school connectedness to prevent youth violence.

CHAPTER 5. CONCLUSION

Summary of Findings

This dissertation study investigated the potential impacts of the Kailua High School's Personal Transition Plan/Leadership (PTP/L) course on students' sense of school connectedness by using a mixed-methods approach. Chapter two reported the findings from a qualitative study using focus groups to gather students' perspectives of the course, which revealed that teachers play a key role in fostering school connectedness. Chapter three investigated the psychometric properties of a comprehensive school connectedness scale that was developed and adapted to evaluate the PTP/L course. Using confirmatory factor analysis, results showed that a five factor model was the best fit, confirming that school connectedness is a multidimensional construct. Chapter four examined the level of students' sense of school connectedness at the end of the course and its association with violent attitudes and behaviors using structural equation modeling. Overall, students reported moderately high levels of school connectedness, with some demographic differences in the degree of school connectedness. In addition, students with high levels of school connectedness were less likely to hold attitudes that condone violent behaviors. Although more longitudinal evaluations need to be conducted, these preliminary results suggest the PTP/L course may be a promising strategy to enhance school connectedness and decrease attitudes that condone violence.

In Chapter two, qualitative findings indicated that students felt that teachers play a key role in the PTP/L course by fostering the various indicators of school connectedness, such as peer connections, academic motivation, attachment, and involvement in school. This finding is consistent with other studies that found that programs that prioritize adult-youth relationships within the curriculum can improve attendance rates and enhance positive youth outcomes (Anderson, Christenson, Sinclair, & Lehr, 2004; Grossman & Bulle, 2006; Whitlock, 2006). To support the relationship-building component of the course, maintaining a small class size and having students stay in one class throughout their time in high school may be essential. Given the important role that teachers can play, professional trainings and opportunities for teachers to form collaborative learning teams may enhance their capacity to meet the course objectives to engage students in

post-high school planning and school activities (Centers for Disease Control and Prevention [CDC], 2009a). Trainings can increase teacher comfort and familiarity with facilitating discussions, mentoring students, and providing college and career guidance to achieve the goals of the course (Chung-Do et al. 2010). Furthermore, providing teachers opportunities to collaborate and exchange ideas with each other may help create a sense of community among the teachers. In turn, this sense of community could be translated into their PTP/L classroom. Examples that students shared of their experiences with the course illustrated their desire to be able to interact more with their PTP/L teacher and classmates and learn about each other at a deeper level than what is usually achieved in an average classroom. According to the students who participated in the focus groups, these relationships can help in meeting the other course objectives of promoting school involvement and enhancing students' post high-school preparedness and planning. In addition, this qualitative study helped highlight the importance of the interpersonal relationships between teachers and students in understanding what defines school connectedness.

Chapter three reported findings that helped illuminate the dimensions of the school connectedness construct by validating a newly developed scale. Through confirmatory factor analyses, the results suggested that school connectedness is comprised of multiple factors that relate to each other but are distinctly different. These factors included school involvement, academic motivation, school attachment, teacher support, and peer relations. Although most researchers agree that school connectedness is a multidimensional construct (Appleton, Christenson, & Furlong, 2008; Marks, 2000, O'Farrell & Morrison, 2003; Reschly & Christenson, 2006), few comprehensive measures of school connectedness exist. Therefore, this newly developed scale may be useful for other researchers and evaluators who are interested in measuring school connectedness. An additional strength of this scale is the participatory nature of its development. University of Hawai'i staff shared existing scales from the literature, which the PTP/L team, comprised of Kailua High School teachers, helped adapt to fit the purpose of the course evaluation. Thus, the school-university partnership ensured that the scale was relevant to the needs of the school, which may ensure sustainability of this evaluation tool. Developing a better understanding of the school connectedness construct

can also be used to develop and refine programs that focus on improving school connectedness.

Using the best fitting five-factor model of this school connectedness scale, Chapter four reported the level of school connectedness among the entire Kailua High School student body at the end of the 2009-2010 school year. Data gathered from a quantitative course evaluation survey showed that, as a whole, students had a moderately high level of school connectedness. Differences by grade level were found in students' school connectedness scores; showing that 10th and 11th graders reported the highest scores of school connectedness. This pattern conflicts with the pattern found in the literature that shows that school connectedness generally decreases as students grow older (Bond et al., 2007; Marks, 2000; Whitlock, 2006). The fact that 10th and 11th graders reported a higher sense of school connectedness compared to 9th graders may partly reflect the growth in relationships that occur from the cumulative duration of the PTP/L class throughout their time at Kailua High School.

Chapter four also included measures of violence by linking the data from the PTP/L course evaluation survey with the data from the student wellness survey to test the associations among students' demographic characteristics, level of school connectedness, and violence indicators. The associations between demographic characteristics of students and the four indicators of violence were generally consistent with the literature. For example, males were more likely to report higher levels of violence across all four indicators than females. The lower the students' grade point average (GPA), the more likely they were to report higher levels of violence. Identifying as a Pacific Islander or Native Hawaiian was also positively associated with violent attitudes and physical violence. This finding is congruent with other studies that found Pacific Islanders and Native Hawaiians to be more likely to report higher rates of violence and delinquency (Mayeda, Hishinuma, Nishimura, Garcia-Santiago, & Mark, 2006; Rudatsikira Muula, & Siziya, 2008). Not surprisingly, these ethnic groups tend to also be socioeconomically marginalized in Hawai'i. They are more likely to be living below the poverty level (Mayeda, Okamoto & Mark, 2005) and underrepresented in higher-paying managerial and professional jobs and overrepresented in lower-paying farming, cleaning, and blue-collared jobs than any other major ethnic groups in Hawai'i (Okamura, 2008). Native

Hawaiians have endured centuries of colonialism and cultural debasement leading to social and educational marginalization in their own homeland (Kaholokula, 2007). Because of the history of alienation from the Western educational system and racist institutional policies, the demands of low-waged jobs may negatively affect their capacity to provide support and guidance to their children (Mayeda et al., 2005), which has been found to affect the mental health of youth, especially for Native Hawaiians (Goebert et al., 2000). Likewise, other Pacific Islander youth and families face challenges to financial and educational achievement as recent migrants to Hawaiʻi. Mayeda, Chesney-Lind, and Koo (2001) found that the perceived lack of interest in school among Native Hawaiian and other Pacific Islanders is a pervasive stereotype that may be internalized by these students, diminishing their overall sense of school connectedness. The multitude of challenges that these youth face is reflected in the findings of the structural equation models, which revealed that being a Pacific Islander was the only significant demographic factor positively related to school connectedness while it was the only ethnicity positively related to physical violence. It is likely that other existing risk factors outweigh the potential positive effects of school connectedness for Pacific Islander youth. Because the PTP/L course alone cannot be expected to overcome the numerous challenges and risk factors that these youth often face, more efforts must be made to improve the educational outcomes of these youth.

The results of the structural equation models suggest that school connectedness is directly related to violent attitudes. In other words, school connectedness does not mediate the relationship between students' demographic characteristics and violence. This suggests that the direct relationship between school connectedness and violence applies to all youth, regardless of their sex, age, socioeconomic status, academic standing, and ethnicity. However, this finding needs to be interpreted with caution, as the strength of the association between school connectedness and violent attitudes was modest. This could be partly due to the fact that the goals of PTP/L course do not explicitly include prevention and reduction of violence among the students. Thus, integrating components of violence prevention strategies into the course curriculum may make a more significant impact on violent outcomes. As in other public health interventions, strategies to enhance school connectedness and prevent violence need to be

multi-pronged and take an ecological approach to impact youth outcomes. Examining other evidence-based strategies recommended by the CDC may be helpful in devising a comprehensive approach to enhancing school connectedness (CDC, 2009a). In addition, examining teachers' attitudes toward the PTP/L course may shed more light on the factors that influence the effectiveness of the course. As the students shared in the focus groups, teacher's level of engagement in the course is essential to its success.

Implications

School connectedness has consistently shown to be a protective factor for a variety of health and educational youth outcomes. Given that school connectedness generally decreases as youth grow older, it is imperative to implement strategies to enhance school connectedness in high schools when levels of parental involvement drastically drop (Catsambis, 2001). Because high school is a critical transitional period for youth, focusing efforts toward promoting school connectedness during this time may be beneficial to promote youth wellness. Results of this dissertation study suggest that the Kailua High School's PTP/L course may be a promising approach to enhance student outcomes through the relationships built and the opportunities created by the course. Finding ways to integrate school connectedness strategies into existing school programs and infrastructure may be an effective approach, especially for schools with limited resources. While most high schools have their students work on their Personal Transition Plan on their own, which are submitted before their senior year to meet the Hawaiʻi Board of Education (BOE) requirements, Kailua High School has created an entire course that innovatively folds in school connectedness to the BOE requirement. The approach developed by Kailua High School to create a more nurturing and close-knit community may be beneficial for other high schools across the State of Hawaiʻi. In addition, there has been some interest from the surrounding middle schools to expand the PTP/L model to help with the transition from middle to high school.

This dissertation study also provides a reliable and valid scale that researchers can use to comprehensively measure school connectedness. To advance the school connectedness literature, the multifaceted nature of school connectedness should be recognized. Although this may increase the number of items that need to be included in future studies, it will help clarify the definition of school connectedness across studies

and better delineate how school connectedness enhances positive youth development. In addition, this scale was developed in partnership with classroom teachers, which ensures its relevance and sustainability in future evaluations.

With the No Child Left Behind Act of 2001 and President Obama's Race to the Top program, evaluating various strategies that schools implement is essential. The partnership between Kailua High School and Asian/Pacific Islander Youth Violence Prevention Center allowed for a participatory evaluation of this course that helped provide preliminary evidence for the effectiveness of the course. This partnership may serve as a model for schools and universities, especially with the limited resources that schools have available to dedicate to program evaluation. Collaborative efforts to evaluate existing school programs also ensure the sustainability of programs. Although many school-based programs have been developed, implemented, and evaluated by researchers, the sustainability of the majority of these programs is limited (Fagan, Hanson, Hawkins, & Arthur, 2008). Once program developers and trainers leave and external funding discontinues, many programs are not sustained. In contrast, the sustainability of the PTP/L course is promising because it has been institutionalized within the Kailua High School as a required credit for all students. At the same time, working with an existing program can pose challenges. Because the Asian/Pacific Islander Violence Prevention Center was not involved in the initial development of the course, violence prevention was not included as an explicit objective of the PTP/L Course. Although the course aimed to enhance protective factors that are associated with violence prevention, it did not directly address violence prevention, which may explain the modest findings reported in Chapter four. Because the main objective of the course was to meet the Hawai'i BOE Personal Transition Plan requirement, lessons on violence prevention were not integrated in the limited time available.

This dissertation study also expands the limited literature on Asians and Pacific Islander youth. Few studies include Asians and Pacific Islanders in their samples. When they are included, they are often grouped into one category, which masks ethnic differences and fails to recognize the diversity of the historical, cultural, and social background of the many ethnic groups that are included in this category (Le, 2002). The findings of this dissertation study support the value of disaggregating the Asian and

Pacific Islander category to uncover disparities among the subgroups. The disparities in violence among Asian and Pacific Islander subgroups highlight the need for more effective violence prevention programs.

Future Directions

Given these preliminary findings, efforts should be made to continue to evaluate the PTP/L course. Because the quantitative data used in this dissertation study were cross-sectional, these findings lay the groundwork for longitudinal studies that can shed more light on the impacts of the course. For example, collecting data on students' sense of school connectedness and violence indicators at the beginning and end of the school year may clarify the relationships between these two constructs. In addition, recruiting a comparison school where the PTP/L course is not being implemented may also help in making cause-and-effect inferences. Because the sample size of Pacific Islanders was small, caution should be made in the interpretations of the results related to these students. All data sources used in this study were self-reported. Therefore, objective indicators of students' academic achievement, such as their grade-point average, college entrance rates, and post-high school job obtainment, should be examined from multiple sources to further validate the findings. In addition to violence outcomes, other health outcomes, such as substance use and suicidal and sexual behaviors, should be examined in the context of the PTP/L course.

The influence of different dimensions of school connectedness on youth outcomes should be explored, as some studies suggest that various factors of school connectedness may have differential impacts on youth outcomes (McNeely & Falci, 2004; Skinner & Belmont, 1993). In addition, the school connectedness scale should be further tested by assessing its test-retest reliability and conducting multigroup invariance tests to examine the stability of the factor structure across ethnic groups (Furlong et al., 2003). Multiple group comparisons should be conducted to determine whether the relationship between school connectedness and violence is consistent across the Asian and Pacific Islander groups. The findings of this study are also limited to students from one high school in a specific region of the United States. Therefore, multi-group comparisons that include youth from other schools and areas may help verify these findings. However, the

diversity of the student sample of this study sheds the much needed attention on Asian and Pacific Islander youth.

Behavior change requires multi-pronged strategies that take contextual factors into consideration (Goebert et al., 2010; Umemoto et al., 2009). The CDC encourages practitioners to employ strategies that consider the individual, relational, communal, and societal factors that shape people's behavior. Involving parents and community members in the effort to enhance students' sense of school connectedness may help promote behavioral change.

Conclusion

This three-part dissertation study illuminated the way that teachers may impact students' sense of school connectedness through the PTP/L course. Providing support to enhance teacher capacity and continuing to prioritize the relationship-building aspects of the course may help promote the effectiveness of the course. This dissertation study also examined the psychometric properties of the school connectedness scale that was developed through the school-university partnership to evaluate the PTP/L course. The results suggest that school connectedness is a multidimensional construct comprised of various factors including school involvement, academic motivation, school attachment, teacher support, and peer relations. As the school connectedness literature moves forward, researchers should aim to use comprehensive measures of school connectedness that capture the multifaceted nature of this construct. The findings of this study also suggest that students' sense of school connectedness developed through the course may be negatively associated with violent attitudes. This association is independent of students' demographic characteristics, suggesting that school connectedness is a protective factor for all youth. In the current environment where schools are struggling to meet national standards with limited resources, Kailua High School provides a concrete example of how academic space can be created to promote positive youth development. Because of the mounting evidence supporting the importance of school connectedness for healthy youth development, more efforts should be made to create and evaluate strategies that promote school connectedness.

APPENDIX A. FOCUS GROUP GUIDE

1. What do you like the most about your PTP/L class?

2. What do you think needs to be changed or improved?

3. Has PTP/L made you become more involved in school? Join clubs, sports, attend school events?

4. Has PTP/L affected the way you feel about Kailua High School /school pride?

5. Do you feel you belong at Kailua High School? Has PTP/L played a role in how you feel?

6. How has PTP/L affected your educational goals?

7. Has PTP/L made you think about your future and post-high school plans?

8. How has PTP/L affected your feelings about community service?

9. Did PTP/L help you get to know your classmates and teachers?

10. Do you feel you can go to your PTP/L teacher for help? Do you talk to your teacher if you're having problems at school, home, friends?

11. Do you feel close to your classmates on your PTP/L class?

12. Any comments or suggestions?

APPENDIX B. FOCUS GROUP PARENT PERMISSION FORM

AGREEMENT TO PARTICIPATE IN THE
ASIAN/PACIFIC ISLANDER YOUTH VIOLENCE PREVENTION CENTER STUDY

PARENT'S FORM TO GIVE PERMISSION FOR HIS/HER YOUTH'S PARTICIPATION

Deborah Goebert, DrPH & Jane Chung-Do, MPH
University of Hawaiʻi at Mānoa, Department of Psychiatry
Asian/Pacific Islander Youth Violence Prevention Center
1441 Kapiʻolani Blvd., Ala Moana Building, 18th Floor, Honolulu, Hawaiʻi 96814
(808) 945-1517

In partnership with Kailua High School (KHS), the Asian/Pacific Islander Youth Violence Prevention Center (API Center) is interested in learning more about the benefits and areas for improvement for the KHS Personal Transition Plan/Leadership (PTP/L) Program. The API Center is a community youth resource and research center. PTP/L has now been implemented at KHS for over two years and was formally evaluated by API Center in Spring 2009. KHS and API Center would like to continue evaluating the PTP/L curriculum for this school year, by including feedback from students.

We are asking for your permission for your child's participation in this research study. He/she has been randomly selected and asked to participate in a small group discussion (called focus group) to provide their opinions on the strengths, areas of improvement, and impacts of the PTP/L course. The focus group will occur during lunch time or after school. If your child gives his/her approval and participates, he/she will be given a gift worth $15-20, such as two movie tickets. School-approved snacks will also be provided.

The possible risks to your child are small and may include emotional discomfort because questions regarding their personal opinions are asked. A trained individual will be there should your child have any questions or concerns. Although unlikely, if your child feels any harm from being in this study, your child will be able to stop participating at any time without penalty. Some small risk is noted in that what is discussed in the focus groups may be disclosed to others outside of the group. Instructions will be provided to decrease the likelihood of this happening.

The discussions will not be tape recorded, although notes will be taken by the facilitators. The notes will NOT include any personally identifiable information (ie. student names) and all information will be kept confidential. Although child abuse is not the focus of this study, we must report to the state suspected cases of child abuse, or if they tell us plans to seriously hurt themselves or others.

If any treatment is required on the part of your child, treatment consisting of the normal range of services offered by his/her school will be available, including being referred to the school counselor or another school official. However, there will be no compensation for such harm.

Although no direct benefit is expected for your child, your child will be helping our efforts in creating beneficial youth programs in the school and community.

I certify that I have read and understand the above, and that I have been given satisfactory answers to any questions. I have been told that I am

82

free to withdraw my permission for my child, and that I can refuse to give my permission for my child to take further part in the study at any time. My decision will not in any way affect my care or cause a loss of benefits to which I or my child might otherwise be entitled.

I agree for my child to be part of this study with the understanding that such approval does not take away any of my or my child's legal rights, nor does it release the investigators or the institution or any employee or agent thereof from liability for negligence.

If I cannot obtain satisfactory answers to my questions or have comments or complaints about my participation in this study, I may contact:

Committee on Human Studies (CHS),
University of Hawaiʻi at Mānoa
2540 Maile Way, Honolulu, Hawaiʻi, 96822
Phone: (808) 956-5007

Print Your Name:
_____

Sign Your Name:
_____

Print the Name of Your Child:
_____

Today's Date: _____/_____/_____

Phone Number(s) that I can be reached just in case:

(1) _____ (2) _____ (3) _____

APPENDIX C. FOCUS GROUP YOUTH ASSENT FORM

AGREEMENT TO PARTICIPATE IN THE
ASIAN/PACIFIC ISLANDER YOUTH VIOLENCE PREVENTION CENTER STUDY

YOUTH'S ASSENT FORM TO PARTICIPATE IN FOCUS GROUP

Deborah Goebert, DrPH & Jane Chung-Do, MPH
University of Hawaiʻi at Mānoa, Department of Psychiatry
Asian/Pacific Islander Youth Violence Prevention Center
1441 Kapiʻolani Blvd., Ala Moana Building, 18th Floor, Honolulu, Hawaiʻi 96814
(808) 945-1517

In partnership with Kailua High School (KHS), the Asian/Pacific Islander Youth Violence Prevention Center (API Center) is interested in learning more about the benefits and areas for improvement for the KHS Personal Transition Plan/Leadership (PTP/L) Program. The API Center is a community youth resource and research center. PTP/L has now been implemented at KHS for over two years and was formally evaluated by APIYVPC in Spring 2009. KHS and API Center would like to continue evaluating the PTPL curriculum for the upcoming school year, by including feedback from students.

We are asking for your approval to take part in this research study. You will be asked to share your thoughts on the PTP/L Course. If you give your approval, you will participate in a small-group discussion (called a focus group) that will take about 30-45 minutes.

The possible risks are small and may include emotional discomfort, such as stirring up uncomfortable feelings and loss of privacy among focus group members. A trained individual will be there should you have any questions or concerns. Although unlikely, if you feel any harm from being in this study, you will be able to stop participating at any time without penalty. If any treatment is required, treatment consisting of the normal range of services offered by your school will be available, including being referred to the school counselor or another school official. However, there will be no compensation for such harm. Some small risk is noted in that what is discussed in the focus groups may be disclosed to others outside of the group. Instructions will be provided to decrease the likelihood of this happening.

All discussions will not be tape recorded, although notes will be taken by the facilitators. The notes will NOT include any personally identifiable information (ie. student names) and all information will be kept confidential. However, we must report to the state suspected cases of child abuse, or if you tell us plans to seriously hurt yourself or others.

Although no direct benefit is expected for you, you will be helping our efforts our efforts in creating beneficial youth programs in the school and community.

For your participation, you will be given gift cards worth $10-20, such as two movie tickets.

You certify that you have read and understand the above, and that you have been given satisfactory answers to any questions. You have been told that you are free to withdraw your approval, that you can stop taking further part in the

study at any time, and that your decision will not in any way affect your care or cause a loss of benefits to which you might otherwise be entitled. You agree to be part of this study with the understanding that such approval does not take away any of your legal rights, nor does it release the investigators or the institution or any employee or agent thereof from liability for negligence. If you cannot obtain satisfactory answers to your questions or have comments or complaints about your participation in this study, you may contact:

> Committee on Human Studies (CHS),
> University of Hawaiʻi at Mānoa
> 2540 Maile Way, Honolulu, Hawaiʻi, 96822
> Phone: (808) 956-5007

Name of Parent/Guardian #1:

_____

Phone numbers: (a) _____-_____; (b) _____-_____; (c) _____-_____

_____   _____/_____/_____
           (print your name)   (date)

_____
           (signature)

APPENDIX D. PTP/L STUDENT SURVEY

44402

Kailua High School
9th GRADE

Today's Date: | | | | | | | | | 2 0 1 0 |
MM   DD   YYYY

Teacher's Last Name: _____

Before you begin: *Please use a blue or black pen to bubble your answers. Do NOT make any stray marks on your survey.*

1. What is your grade level in school right now?   O 9th   O 10th   O 11th   O 12th

2. What is your sex?   O Male   O Female

3. On average, what were your grades on your last report card? (Bubble only **one**.)
O A   O A-   O B+   O B   O B-   O C+   O C   O C-   O D or less   O Don't know

4. Which of the following do you most strongly __identify__ with? (Bubble only **one**.)
O Hawaiian   O Black/African American   O Latino   O Japanese/Okinawan
O Samoan   O Portuguese   O Filipino   O Other Asian   O Don't Know
O Other Pacific Islander   O Puerto Rican   O Chinese   O Caucasian   O Other: _____

5. Do you qualify to get free or reduced cost lunch?   O Yes   O No

Please indicate how much you agree or disagree with the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6. PTP/L has encouraged me to get involved in school-related activities (join athletics, clubs, leadership, etc.).	O	O	O	O	O
7. PTP/L has encouraged me to attend school-related events (prom, dances, games, concerts, M&M Night, Vocademics Night, Taste of CPM, Celebration of the Arts, etc.).	O	O	O	O	O
8. PTP/L has helped me get to know people at KHS that I may not have otherwise met or gotten to know (other students, teachers, staff).	O	O	O	O	O
9. PTP/L has helped me understand the importance of my grades.	O	O	O	O	O
10. PTP/L has motivated me to do better in my classes.	O	O	O	O	O
11. PTP/L has helped me understand the importance of education.	O	O	O	O	O
12. PTP/L has contributed to making me feel like I am part of this school.	O	O	O	O	O
13. PTP/L has helped me feel unhappy to be at school.	O	O	O	O	O
14. PTP/L has made me want to give back to KHS.	O	O	O	O	O
15. I feel connected with my PTP/L teacher.	O	O	O	O	O
16. I can talk to my PTP/L teacher if I have a problem or need advice.	O	O	O	O	O
17. My PTP/L teacher makes the lessons interesting and meaningful.	O	O	O	O	O
18. My PTP/L teacher treats me unfairly.	O	O	O	O	O
19. My PTP/L teacher has high expectations of me.	O	O	O	O	O
20. I feel connected with the students in my PTP/L class.	O	O	O	O	O
21. Students in my PTP/L class respectfully listen to each other during class discussions.	O	O	O	O	O
22. PTP/L has helped me to get along with others (communicate and listen actively).	O	O	O	O	O

Page 1, 5/12/10

86

Please indicate how much you agree or disagree with the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. PTP/L has helped me feel more confident and prepared for my post-high school plans.	O	O	O	O	O
24. PTP/L has taught me how to set and reach my goals.	O	O	O	O	O
25. PTP/L has helped me figure out what I want to do after high school.	O	O	O	O	O
26. PTP/L has motivated me to attend college.	O	O	O	O	O
27. PTP/L has motivated me to think about my future.	O	O	O	O	O
28. PTP/L taught me leadership skills that helped me be a better community contributor.	O	O	O	O	O
29. PTP/L has helped me want to volunteer more.	O	O	O	O	O
30. PTP/L has helped me to see that it is important to help others, even if I don't get paid for it.	O	O	O	O	O

31. Name 5 clubs at Kailua High School.

32. What is the purpose of the Paddling Out Project?

33. What is your conflict resolution style?

34. Why is goal setting important to an individual?

35. Discuss the value of a logo to a person, group, team, organization, school, etc.

Please indicate how much you agree or disagree with the following statements.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
36. I believe in the purpose of the PTP/L class.	o	o	o	o	o
37. PTP/L has helped KHS become a better school.	o	o	o	o	o
38. I have enjoyed my PTP/L class.	o	o	o	o	o
39. I have learned a lot in my PTP/L class.	o	o	o	o	o
40. I complete most of the assignments given in PTP/L.	o	o	o	o	o
41. PTP/L assignments are important and useful for my life (resume, personal statement, completing job applications, practicing job interviews).	o	o	o	o	o
42. I am given enough guidance to finish my PTP/L assignments.	o	o	o	o	o
43. The PTP/L lessons have become more hands-on, fun, and engaging from last year.	o	o	o	o	o
44. My PTP/L class is a free period/study hall.	o	o	o	o	o
45. The work in my PTP/L class is helping me to fulfill the requirements of my PTP binder/credit.	o	o	o	o	o

46. Name one thing you like about PTP/L.

47. Name one thing you would change/improve about PTP/L.

44402

APPENDIX E. SCHOOL CONNECTEDNESS SCALE

Components	Statements
school involvement	This course has encouraged me to get involved in school-related activities.
	This course has encouraged me to attend school-related events.
	This course has helped me get to know people at the school that I may not have otherwise met or gotten to know
academic motivation	This course has helped me understand the importance of my grades.
	This course has motivated me to do better in my classes.
	This course had helped me understand the importance of education.
school attachment	This course has contributed to making me feel like I am part of this school.
	This course has made me want to give back to our school.
teacher support	I feel connected with my teacher.
	I can talk to my teacher if I have a problem or need advice.
	My teacher makes the lessons interesting and meaningful.
	My teacher has high expectations of me.
peer relations	I feel connected with the students in my class.
	Students in my class respectfully listen to each other during class discussions.
	This course has helped me to get along with others.

All items were measured with a 5-point Likert scale (1=*strongly disagree,* 5=*strongly agree*).

REFERENCES

Adler, C. (2008, November). *Fighting, self-reliance, and being the "bigger man": Youth violence in Hawaiian and Samoan communities.* Presentation at the annual meetings of the American Society of Criminology, St. Louis, Missouri.

Aisenberg, E., & Herrenkohl, T. I. (2008). Community violence in context: Risk and resilience in children and families. *Journal of Interpersonal Violence, 23*(3), 296-315.

Alison, S., Roeger, L., & Reinfield-Kirkman, N. (2009). Does school bullying affect adult health? Population survey of health-related quality of life and past victimization. *Australian and New Zealand Journal of Psychiatry, 43*(12), 1163-1170.

Allison, P. D. (2002). *Missing Data*. Thousand Oaks, CA: Sage.

Allison, P. D. (2005). Imputation of categorical variables with PROC MIX. In G. S. Nelson (Ed.). *30th Annual SAS Users Group International Conference (SUGI 30)* (Paper 113-130). Philadelphia, PA.

Anderman, E. M. (2002). School effects on psychological outcomes during adolescence. *Journal of Educational Psychology, 94*(4), 795-809.

Anderson, A. R., Christenson, S. L., Sinclair, M. F., & Lehr, C. A. (2004). Check & Connect: the importance of relationships for promoting engagement with school. *Journal of School Psychology, 42,* 95-113.

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical methodological issues of the construct. *Psychology in the Schools, 45*(5), 369-386.

Battistich, V., & Hom, A. (1997). The relationship between students' sense of their school community and students' involvement in problem behavior. *American Journal of Public Health, 87,* 1997–2001.

Billing, S. H., & Klute, M. M. (2002). The impact of service-learning on MEAP: A large-scale study of Michigan Learn and Serve grantees. Denver, CO: RMC Research Corporation.

Black, S. (2000). Together again: The practice of looping keeps students with the same teachers. *American School Board Journal, 187*(6), 40-43.

Bollen, K. A. (2000). Modeling strategies: In search of the holy grail. *Structural Equation Modeling, 7*(1), 74-81.

Bond, L., Butler, H., Dip.Ed, G.Dip. in Adol Health, Thomas, L., Carlin, J., et al. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health, 40,* 357, e9-e18.

Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., & Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics, 106,* 1017-1021.

Borowsky, I. W., Ireland, M., & Resnick, M. D. (2002). Violence risk and protective factors among youth held back in school. *Ambulatory Pediatrics, 2,* 475-484.

Bowlby, J. (1969). *Attachment and Loss: vol 1: Attachment.* London: The Hogarth Press and the Institute of Psycho-Analysis.

Brookmeyer, K. A., Fanti, K. A., & Henrich, C. C. (2006). Schools, parents, and youth violence. A multilevel, ecological analysis. *Journal of Clinical Child and Adolescent Psychology, 35*(4), 504-514.

Buckley, L., Sheehan, M., & Chapman, R. (2009). Adolescent protective behavior to reduce drug and alcohol use, alcohol-related harm and interpersonal violence. *Journal of Drug Education, 39*(3), 289-301.

Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming.* Mahwah, NJ: Erlbaum.

Catalano, R. F., Haggerty, K. P., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health, 74*(7), 252-261.

Catalano, R. F., & Hawkins. J. D. (1996). The Social Development Model: A theory of antisocial behavior. In J. D. Hawkins (Eds.), *Delinquency and Crime: Current Theories* (149-197)*.* New York: Cambridge University Press.

Catalano, R. F., Loeber, R., & McKinney, K. C. (1999). *School and community*

interventions to prevent serious and violence offending. Juvenile Justice Bulletin, Office of Juvenile Justice and Delinquent Prevention (Dept. of Justice), Washington, DC.

Catsambis, S. (2001). Expanding knowledge of parental involvement in children's secondary education: Connections with high school seniors' academic success. *Social Psychology of Education, 5*, 149-177.

Centers for Disease Control and Prevention. (2009a). *School connectedness: Strategies for increasing protective factors among youth.* Atlanta, GA: US Department of Health and Human Services.

Centers for Disease Control and Prevention. (2009b). *Violence prevention-the Social Ecological Model: A framework for prevention.* Retrieved January 2011 from http://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html

Centers for Disease Control and Prevention. (2010a). Youth risk behavioral surveillance- United States, 2009. Morbidity and Mortality Weekly Report, *Surveillance 1 Summaries, 59*(SS-5), 1-142.

Centers for Disease Control and Prevention. (2010b). *Understanding youth violence fact sheet.* Retrieved January 2011 from http://www.cdc.gov/violenceprevention/pdf/YV-FactSheet-a.pdf

Centers for Disease Control and Prevention. (2010c). *Youth violence: Facts at a glance.* Retrieved January 2011 from http://www.cdc.gov/violenceprevention/pdf/YV-DataSheet-a.pdf

Center for Substance Abuse Prevention. (2000). *Mentoring Initiatives: An Overview of mentoring.* Washington, DC: U.S. Department of Health and Human Services, Center for Substance Abuse Prevention.

Chung-Do, J., Goebert, D., Filibeck, K., Chang, J., Hishinuma, E., Wilcox, P., et al. (2010). *Personal Transition Plan/Leadership course evaluation 2009-2010. Summary of results technical report.* University of Hawai'i, Asian/Pacific Islander Youth Violence Prevention Center.

Chung-Do, J., Goebert, D., & Chang, J. (2011). *Examining the psychometric properties of a comprehensive school connectedness scale*. Manuscript submitted for publication.

Chung-Do, J., Goebert, D., Chang, J. & Hamagani, F. (2011). *The impact of a course aimed at strengthening school connectedness and its association with violent attitudes and behaviors*. Manuscript in preparation.

Crick, N. R., Casas, J. F., & Nelson, D. A. (2002). Toward a more comprehensive understanding of peer maltreatment: Studies of relational victimization. *Current Directions in Psychological Science, 11*(3), 98–101.

Dahlberg, L.L., Toal, S. B., Swahn, M., & Behrens, C. B. (2005). *Measuring violence-related attitudes, behaviors, and influences among youths: A compendium of assessment tools* (2nd edition). Atlanta, GA: Centers for Disease Control and Prevention.

Danielson, C. K., de Arellano, M. A., Ehrenreich, J. T., Suárez, L. M., Bennett, S. M., Cheron, D. M., et al. (2006). Identification of high-risk behaviors among victimized adolescents and implications for empirically supported psychosocial treatment. *Journal of Psychiatric Practice, 12*(6), 364-383.

Esbensen, F., Miller, M. H., Taylor, T. J., He, N., & Freng, A. (1999). Differential attrition rates and active parental consent. *Evaluation Review, 23*(3), 316-335.

Fagan, A. A., Hanson, K., Hawkins, J. D., & Arthur, M. W. (2008). Bridging science to practice: Achieving prevention program implementation fidelity in the Community Youth Development Study. *American Journal of Community Psychology, 41,* 235-249.

Faircloth, B. S. (2009). Making the most of adolescence: Harnessing the search for identity to understand classroom belonging. *Journal of Adolescent Research, 24,* 321-348.

Festinger, L., Riecken, H. W., Jr, & Schachterm, S. (1956). *When prophecy fails*. Minneapolis, MN: University of Minnesota Press.

Filibeck, K., Chung-Do, J., Miao, T., Goebert, D., Hishinuma, E. S., & Hanoa, S. (2010). *M&M Night Survey: Summary of results technical report*. University of Hawaiʻi, Asian/Pacific Islander Youth Violence Prevention Center.

Fraser, B. J. (1998). Classroom environment instruments: Development, validity, and applications. *Learning Environments Research, 1,* 7-33.

Fredericks, J., Blumenfeld, P., & Paris, A. (2004). School engagement: Potential of the

concept, and state of the evidence. *Review of Educational Research, 74,*(1), 59-109.

Furlong, M. J., O'Brennan, L. M., & You, S. (in press). Psychometric properties of the Add Health School Connectedness Scale for 18 socio-cultural groups. *Psychology in the Schools.*

Furlong, M. J., Whipple, A. D., St. Jean, G., Simental, J., Soliz, A., & Punthuna, S. (2003). Multiple contexts of school engagement: Moving toward a unifying framework for educational research and practice. *The California School Psychologist, 8,* 99-113.

Gerbing, D. W. & Anderson, J. C. (1984). On the meaning of within-factor correlated measurement errors. *Journal of Consumer Research, 11,* 572-580.

Glanz, K., Rimer, B. K., & Lewis, F. M. (2002). *Health behavior and health education* (3rd ed.). San Francisco, CA: Jossey-Bass.

Gleitman, H., Fridlund, A. J. & Resiberg, D. (1999). *Psychology.* (5th ed.). New York: WW Norton & Company.

Goebert, D., Chang, J. Y., Chung-Do, J., Else, I. R. N., Hamagami, F., Helm, S., et al. (2010). Social ecological determinants of youth violence among ethnically diverse Asian and Pacific Islander students. *Maternal and Child Health Journal,* DOI. 10.1007/s10995-010-0726-0.

Goebert, D., Else, I., Matsu, C., Chung-Do, J. & Chang, J. (2010). The Impact of cyberbullying on substance use and mental health in a multiethnic sample. *Maternal and Child Health Journal,* DOI. 10.1007/s10995-010-0672-x.

Goebert, D., Nahulu, L., Hishinuma, E., Bell, C., Yuen, N., Carlton, B., et al. (2000). Cumulative effect of family environment on psychiatric symptomatology among multiethnic adolescents. *Journal of Adolescent Health, 27*(1), 34-42.

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime.* Stanford, CA: Stanford University Press.

Grossman, J. B., & Bulle, M. J. (2006). Review of what youth programs do to increase connectedness of youth with adults. *Journal of Adolescent Health, 30,* 788-799.

Grunbaum, J. A., Kann, L., Kinchen, S., Ross, J. G., Lowry, R., Harris, W. A., et al.

(2003). Youth risk behavior surveillance. *Morbidity and Mortality Weekly Report, 53*(SS-2), 1-100.

Haney, W., Madaus, G., Abrams, L., Wheelock, A., Miao, J. & Gruia, I. (2004). *The education pipeline in the United States 1970-2000.* Chestnut Hill, MA: The National Board on Educational Testing and Public Policy. Retrieved April 2010 from http://www.bc.edu/research/nbetpp/statements/nbr3.pdf

Hawaiʻi State Board of Education. (n.d.). *Introduction, enrollment.* Retrieved March 2011 from http://doe.k12.hi.us/about/intro_enrollment.htm

Hawaiʻi State Board of Education. (2009). *High school graduation.* Retrieved April 2010 from http://graduation.k12.hi.us/ptp.html

Hawaiʻi State Department of Education (2010). Official 2010-2011 public and charter school enrollment. Retrieved March 2011 from http://lilinote.k12.hi.us/STATE/COMM/DOEPRESS.NSF/a1d7af052e94dd120a2 561f7000a037c/82e939b60ecbec820a2577c00081dc60?OpenDocument.

Hawaiʻi State Department of Education School Status and Improvement Report (2010). *Kailua High School 2009-2010.* Retrieved February 2011 from http://arch.k12.hi.us/PDFs/ssir/2010/Windward/SSIR309-4.pdf

Hawaiʻi State Department of Health (2010a). *Experienced cyber-bullying in the past 12 months by school types, state, gender, grade level, DOS race-ethnicity.* Retrieved December 2010 from Hawaiʻi Health Data Warehouse http://www.hhdw.org/cms/uploads/Data%20Source_%20YRBSS/YRBS_School_ IND_00009.pdf

Hawaiʻi State Department of Health (2010b). *Physical fighting in the past year by school type, state, gender, grade level, DOH race-ethnicity.* Retrieved December 2010 from Hawaiʻi Health Data Warehouse http://www.hhdw.org/cms/uploads/Data%20Source_%20YRBSS/YRBS_Injuries _IND_00003.pdf

Hawaiʻi State Department of Human Services Benefit (n.d.). *Detailed information on state of Hawaii Assistance Programs.* Retrieved April 2010 from http://www.afaaloha.com/aefiles/Detailed%20information%20on%20State%20of %20Hawaii%20%20Assistance%20Programs.pdf

Henrich, C. C., Brookmeyer, K. A., & Shahar, G. (2005). Weapon violence in

    adolescence: Parent and school connectedness as protective factors. *Journal of*

    Adolescent Health, 37, 306-312.

Herrenkohl, T. I., Maguin, E., Hill, K. G., Hawkins, J. D., Abbott, R. D., & Catalano, R.

    F. (2000). Developmental risk factors for youth violence, *Journal of Adolescent*

    Health, 26(3), 176-186.

Herrera, C., Sipe, C. L., & McClanahan, W. S. (2000). *Mentoring school-age children:*

    relationship development in community-based and school-based programs.

    Philadelphia, PA: Public–Private Ventures.

Hishinuma, E. S., Johnson, R. C., Kim, P., Nishimura, S. T., Makini, G. K., Andrade, N.

    N., et al. (2005). Prevalence and correlates of misconduct among ethnically

    diverse adolescents of Native Hawaiian/Part-Hawaiian and Non-Hawaiian

    ancestry. *International Journal of Social Psychiatry, 51*(3), 242-258.

Ho, J., Yeh, M., McCabe, K., & Hough, R. L. (2007). Parental cultural affiliation and

    youth mental health service use. *Journal of Youth and Adolescence, 36*(4), 529-

    542.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure

    analysis: Conventional criteria versus new alternatives. *Structural Equation*

    Modeling, 6, 1−55.

Israel, B. A., Schulz, A. J., Parker, E. A., Becker, A. B., Allen, A., & Guzman, J. R.

    (2003). Critical issues in developing and following community-based

    participatory research principles. In M. Minkler & N. Wallerstein (Eds.),

    Community-based participatory research for health (pp.56-73). San Francisco:

    Jossey-Bass.

Jacobson, K. C. & Rowe, D. C. (1999). Genetic and environmental influences on the

    relationships between family connectedness, school connectedness, and

    adolescent depressed mood: sex difference. *Developmental Psychology, 35*(4),

    926-939.

Jenkins, P. (1997). School delinquency and the school social bond. *Journal of*

    Research in Crime and Delinquency, 34(3), 337-367.

Jennings, G. (2003). An exploration of meaningful participation and caring relationship

as contexts for school engagement. *The California School Psychologist, 8,* 43-52.

Jimerson, S. R., Campos, E., & Greif, J. L. (2003). Toward an understanding of definitions and measures of school engagement and related terms. *The California School Psychologist, 8,* 7-27.

Johnson, S. L. (2009). Improving the school environment to reduce school violence: A review of the literature. *Journal of School Health, 79*(10), 451-465.

Jöreskog, K. G., & Sörbom, D. (1984). *LISREL VI user's guide* (3rd edition). Mooresville, IN: Scientific Software. In L.G. Grimm & P. R. Yarnold (2000). (Eds.), *Reading and understanding more multivariate statistics.* American Psychological Association: Washington, D.C.

Kaholokula, J. K. (2007). Colonialism, acculturation, and depression among kanaka maoli of Hawaiʻi, In P. Culbertson, M. N. Agee, & C. Makasiale (Eds.), *Penina Uliuli: Contemporary challenges in mental health of Pacific Peoples* (pp. 180-195). Honolulu, HI: University of Hawaiʻi Press.

Karen, R. (1998). *Becoming attached: First relationships and how they shape our capacity to love.* New York: Oxford University Press.

Karen, S., Cohen, P., & Brooks, J. S. (1998). Adolescent school experiences and dropout, adolescent pregnancy, and young adult deviant behavior. *Journal of Adolescent Research, 13*(1), 49-72.

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74*(7), 262–273.

Kipke, M. D. (1999). *Risks and opportunities: Synthesis of studies on adolescence.* Washington, DC: National Academy Press.

Kiriakidis, S. P., & Kavoura, A. (2010). Cyberbullying: A review of the literature on harassment through the internet and other electronic means. *Family and Community Health, 33*(2), 82-93.

Kreager, D. A. (2007). Unnecessary roughness? School sports, peer networks, and male adolescent violence. *American Sociological Review, 72*(5), 705-724.

Le, T. (2002). Delinquency among Asian/Pacific Islanders: Review of literature and research. *The Justice Professional, 15*(1), 57-70.

Lee, C. (2007). *Culture, literacy, and learning.* New York, NY: Teachers' College Press.

Libbey, H. P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health, 74*(7), 274-283.

LoSciuto, L., Rajala, A., Townsend, T., & Taylor, A. S. (1996). An outcome evaluation of Across Ages: An intergenerational mentoring approach to drug prevention. *Journal of Adolescent Research, 11*(1), 116–25.

Mahoney, J. (1997). *From companions to convictions: Peer groups, school engagement, and development of criminality.* Paper presented at the Biennial Meeting of the Society for Research on Child Development, Washington, DC.

Mahoney, J., & Cairns, R. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology, 33,* 241-253.

Mahoney, J. L., Cairns, B. D., & Farmer, T. W. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology, 95*(2), 409-418.

Makaiau, A. S. (2010). Adolescent identity exploration in a multicultural community context: An educator's approach to rethinking psychological identity interventions *ProQuest Dissertations and Theses.* (UMI No. 3415880).

Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years, *American Educational Research Journal, 37,* 153-184.

Martin, A. J., & Dowson, M. (2009). Interpersonal relationships, motivation, engagement, and achievement: Yields for theory, current issues, and educational practice. *Review of Educational Research, 79,* 327-365.

Mayeda, D. T., Chesney-Lind, M., & Koo, J. (2001). Talking story with Hawaii's youth: confronting violent and sexualized perceptions of ethnicity and gender. *Youth & Society, 33*(1), 99-128.

Mayeda, D. T., Hishinuma, E S., Nishimura S. T., Garcia-Santiago, O., & Mark, G. Y. (2006). Asian/Pacific Islander Youth Violence Prevention Center: interpersonal violence and deviant behaviors among youth in Hawai'i. *Journal of Adolescent Health, 39*(2), 276.e1-11.

Mayeda, D. T., Okamoto, S. K., & Mark, G. Y. (2005). Adapting culture in a colonial and capitalized world: Role strain and acculturation in Hawaiian and Samoan families.

Journal of Poverty, 9(1), 105-120.

Mayeda, D. T., Pasko, L., & Chesney-Lind, M. (2006). "You got to do so much to actually make it": Gender, ethnicity, and Samoan youth in Hawai'i. *AAPI nexus, 4*(2), 1-20.

McNeal, R. B. (1995). Extracurricular activity participation and dropping out of high school. *Sociology of Education, 68,* 62-80.

McNeely, C. A. (2005). Connection to school. In Moore, K. A. & Lippman, L. H. (Eds.), *What do children need to flourish? Conceptualizing and measuring indicators of positive development* (289-303). New York: Springer.

McNeely, C.A. & Falci, C. (2004). School connectedness and the transition into and out of health risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health, 74*(7), 284-292.

McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health, 72*(4), 138-146.

Meyer, S., & Hofshire, L. (2003). *Evaluation of the Michigan Learn and Serve Program.* Denver, CO: RMC Research Corporation.

Muthén, L. K., & Muthén, B. O. (2006). *Mplus user's guide (4ᵗʰ ed.).* Los Angeles, CA: Muthén and Muthén.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association, 285*(16), 2094–2100.

National Association of Manufacturers (20050). *2005 skills gap report: A survey of the American manufacturing workforce.* New York: Deloitte Development LLC.

National Research Council (2004). *Engaging Schools*. Washington, DC: The National Academic Press.

National High School Center. (n.d). *Easing the transition to high school; Research and best practices designed to support high school learning.* Retrieved April 2010 from http://www.betterhighschools.org/docs/NHSC_TransitionsReport.pdf

Nunnally, J. C. (1978). *Psychometric Theory.* New York: McGraw-Hill.

O'Farrell, S. L., & Morrison, G. M. (2003). A factor analysis exploring school bonding and related constructs among upper elementary students. *The California School Psychologist, 8,* 53-72.

Office of Minority Health (2009). *Asian American/Pacific Islander Profile.* Retrieved February 2011 from http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlID=53

Okamura, J. Y. (2008). *Ethnicity and inequality in Hawai'i.* Philadelphia: Temple University Press.

Ozer, E. J. (2005). The impact of violence on urban adolescents: Longitudinal effects of perceived school connection and family support. *Journal of Adolescent Research, 20*(2), 167-192.

Paetsch, J. J. & Bertrand, L. D. (1997). The relationship between peer, social, and school factors, and delinquency among youth. *Journal of School Health, 67*(1), 27-32.

Peter D. Hart Research Associates. (2005). *Rising to the challenge: Are high school graduates prepared for college and work? A study of recent high school graduates, college instructors and employers.* Retrieved April 2010 from http://www.achieve.org/files/pollreport_0.pdf.

Rak, C. F. & Patterson, C. F. (1996.) Promoting resilience in at-risk children. *Journal of Counseling and Development, 74*(1) 368–73.

Raskaukas, J. & Stoltz A. D. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental Psychology, 43*(3), 564-575.

Reschly, A. & Christenson, S. L. (2006). Research leading to a predictive model of dropout and completion among students with mild disabilities and the role of student engagement. *Remedial and Special Education, 27,* 276-292.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J. et al. (1997). Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *Journal of American Medical Association, 278*(10), 823-832.

Reynolds, J. C., Barnhart, B., & Martin, B. N. (1999). Looping: A solution to the retention vs. local promotion dilemma. *ERS Spectrum, 17*(2), 16-20.

Rodney, L. W., Johnson, D. L., & Srivastava, R. P. (2005). The impact of culturally

relevant violence prevention models on school-age youth. *Journal of Primary Prevention, 26*(5), 439-454.

Rubin, D.B. (1976). Inference and missing data. *Biometrika, 63,* 581-592.

Rudatsikira, E., Muula, A. S., & Siziya, S. (2008). Variables associated with physical fighting among US high-school students. *Clinical and Practical Epidemiology and Mental Health, 4,* 16.

Ryan, R. M. (1995). Psychological needs and facilitation of integrative process. *Journal of Personality, 63* (3), 397-427.

Schaefer, J.L. (2001). Multiple imputation with PAN. In L.M. Collins & A. Sayer (Eds.), *New Methods for the Analysis of Change*. Washington, DC: American Psychological Association.

Scull, S. (n.d.). *New directions in Pacific Islander education: Engagement, partnerships, and aspiration.* University of Queensland. Retrieved January 2011 from http://www.eccq.com.au/downloads/Publications/Summit/SScullPR.pdf

Sharkey, J. D., You, S., & Schnoebelen, K. (2008). Relations among school assets, individual resilience, and student engagement for youth grouped by level of family functioning. *Psychology in the Schools, 45*(5), 402-418.

Shernoff, D. J., & Vandell, D. L. (2007). Engagement in after-school program activities: Quality of experience from the perspective of participants, *Journal of Youth and Adolescence, 36,* 891-903.

Shochet, I. M. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child and Adolescent Psychology, 35*(2), 170-179.

Silverman, D., & Marvasti, A. (2008). *Doing qualitative research.* Thousand Oaks, CA: Sage Publications.

Skinner, E. A. & Belmont, M. J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across school year. *Journal of Educational Psychology, 85*(4), 571-581.

Steiger, J. H. (1998). A note on multiple sample extensions of the RMSEA fit index. *Structural Equation Modeling, 5,* 411–419.

Steiger, J. H., & Lind, J. C. (May 1980). *Statistically based tests for the number of*

common factors. Paper presented at the annual meeting of the Psychometric Society, Iowa City, IA.

Thomas, S. P., & Smith, H. (2004). School connectedness, anger behaviors, and relationships of violent and nonviolent American youth. *Perspectives in Psychiatric Care, 40*(4), 135-148.

Tierny, J. P., & Grossman, J. (1995). *Making a difference: An impact study.* Philadelphia, PA: Public–Private Ventures.

Trochim, W. M. K. (2006). *Research methods knowledge base. Convergent Discriminant Validity.* Retrieved November 12, 2010 from http://www.socialresearchmethods.net/kb/convdisc.php

Tucker, L. R. & Lewis, C. (1973). The reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38,* 1-10.

Umemoto, K., Baker C. K., Helm, S., Miao, T., Goebert, D. A., & Hishinuma, E. (2009). Moving toward comprehensiveness and sustainability in a social ecological approach to youth violence prevention: Lessons from the Asian/Pacific Islander Youth Violence Prevention Center. *American Journal of Community Psychology, 44*(3-4), 221-232.

United States Census Bureau (2010). *State & County QuickFacts: State of Hawaiʻi.* Retrieved March 2010 from: http://quickfacts.census.gov/qfd/states/15000.html

United States Department of Health and Human Services (n.d.). *Healthy People 2010.* Retrieved in January 2010 from http://www.healthypeople.gov/default.htm

United States Office of Human Resources (2008). *Asian American and Pacific Islander-Primer.* Retrieved in December 2009 from http://www.epa.gov/aapi/primer.htm

Voelkl, K. E., & Frone, M. R. (2000). Predictors of substance use at school among high school students. *Journal of Educational Psychology, 92*(3), 583-592.

Voisin, D. R., Salazar, L. F., Crosby, R., Diclemente, R. J., Yarber, W. L., & Staples-Horne, M. (2005). Teacher connectedness and health related outcomes among detained adolescents. *Journal of Adolescent Health, 37,* 337.e17-337.e23.

Wegner, E. L., Garcia-Santiago, O., Nishimura, S. T., & Hishinuma, E. S. (2010). Educational performance and attitudes toward school as risk-protective factors for violence: A study of the Asian/Pacific Islander Youth Violence Prevention

Center. *Psychology in the Schools, 47*(8), 789-802.

Werner, E.E. (1984). Resilient children. *Young Children, 40*(1) 68–72.

WestEd. (2010). *The validity of student self-report of risk behaviors.* Retrieved
  December 2010 from http://chks.wested.org/resources/validity.pdf

Westsat. (2006). *Data on health and well-being of American Indians, Alaska Natives, and
  Other Native Americans data catalog. Hawaii Health Survey.* Retrieved January
  2011 from http://aspe.hhs.gov/hsp/06/catalog-ai-an-na/HHS.htm

Wheelock, A. & Miao, J. (2005). The ninth grade bottleneck. *The School Administrator,
  62*(3), 3640.

Whitlock, J. L. (2006). Youth perceptions of life at school: Contextual correlates of
  school connectedness in adolescence. *Applied Developmental Science, 10*(1), 13-
  29.

Wilkins-Shurmer, A., O'Callaghan, M. J., Najman, J. M., Bor, W., Williams, G., &
  Anderson, M. J. (2003). Association of bullying with adolescent health-related
  quality of life. *Journal of Pediatric and Child Health, 39*(6), 436-441.

Williams, J. R., Fredland, N., Han, H., Campbell, J. C., & Kub, J. E. (2009). Relational
  aggression and adverse psychosocial and physical health symptoms among urban
  adolescents. *Public Health Nursing, 26*(6), 489-499.

Yamauchi, L. A., Billig, S. H., Meyer, S., & Hofshire, L. (2006). Student outcomes
  associated with service-learning in a culturally relevant high school program. In.
  R. N. Reebs (Eds.), In *Community Action Research: Benefits to community
  members and service providers.* (pp. 149-164). London: Haworth Press.

Youngblade, L. M., Theokas, C., Schulenberg, J., Curry, L., Huang, I. C., & Novak, M.
  (2007). Risk and promotive factors in families, schools, and communities: A
  contextual model of positive youth development in adolescence, *Pediatrics, 119*
  (S47-S53).

Ying, Y., & Han, M. (2006). The effect of intergenerational conflict and school-based
  racial discrimination on depression and academic achievement in Filipino
  American. *Journal of Immigrant and Refugee Studies, 4*(4), 19-35.