

California State University, San Bernardino

CSUSB ScholarWorks

Theses Digitization Project

John M. Pfau Library

2011

Contributions of wellness on student achievement and behavioral engagement

Eric Michael Vreeman

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd-project>



Part of the [Educational Administration and Supervision Commons](#)

Recommended Citation

Vreeman, Eric Michael, "Contributions of wellness on student achievement and behavioral engagement" (2011). *Theses Digitization Project*. 3951.

<https://scholarworks.lib.csusb.edu/etd-project/3951>

This Dissertation is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

CONTRIBUTIONS OF WELLNESS ON STUDENT ACHIEVEMENT AND
BEHAVIORAL ENGAGEMENT

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Eric Michael Vreeman
December 2011

CONTRIBUTIONS OF WELLNESS ON STUDENT ACHIEVEMENT AND
BEHAVIORAL ENGAGEMENT

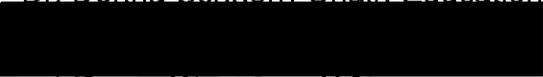
A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

by
Eric Michael Vreeman
December 2011

Approved by:



Dr. Donna Schnorr, Chair, Education



Dr. Brett Nelson



Dr. Louie F. Rodriguez

12-1-11
Date

ABSTRACT

Wellness is a core construct that is at the heart of positive psychology. It was formed from the research on resiliency, prevention science, social-emotional learning, and positive youth development. However, little research on wellness has assessed its predictive value on academic achievement and behavioral engagement across seventh, eighth, and ninth grade. A correlational model was used to test hypothesized relationships between the ten domains of wellness (adaptability, connectedness, conscientiousness, emotional self-regulation, empathy, initiative, mindfulness, optimism, self-efficacy, social competence), as measured by the Child and Adolescent Wellness Scale (CAWS), and factors of academic achievement and behavioral engagement. The study included 563 public school students in grades seven through nine. Significant relationships were identified between the domains of wellness, California Standards Tests (CST) in English-language arts and mathematics, grade point average, and number of courses failed. Subgroup analysis revealed that socioeconomically disadvantaged (SED) students scored significantly lower in all areas of wellness when compared with non-SED students. Further, there were significant differences in wellness between white SED and white non-SED students. However, there were no significant differences found between Hispanic SED students and white SED students. These findings suggest that wellness is an equally important construct for SED Hispanic and white students. These findings indicate that schools could benefit from prevention programs that focus on

wellness factors for all students, with special attention on developing wellness among SED students, as they attempt to meet the NCLB requirements in the areas of academic achievement and reduced dropout rates.

ACKNOWLEDGEMENTS

It is an honor to acknowledge those who have made my journey possible. I would like to offer my special thanks to my Committee Chair, Dr. Donna Schnorr, who served as my advisor and at times my personal counselor. My gratitude goes to Dr. Brett Nelson and Dr. Louie Rodriguez for acting as my committee members. They all have kindly given me their time and knowledge to help me complete this research. The theoretical and practical foundation of this research came from the courses, interactions with educational theories, and the incredible professors that walk the halls of the Education building and exposed me to a new and deeper way of thinking.

I am truly appreciative for the program and the leadership of Dr. Debbie Stine and Dr. Bonnie Piller as they coordinated the program during my enrollment. I am grateful to many persons in Cohort I and Cohort II who spent hours, days, months, and years together reshaping our educational philosophies.

I would like to acknowledge my family. First and most importantly, I would like to thank my best friend of 23 years, my wife Michelle. You are my inspiration and my life. I could not have done this without your support over the past few years. This is truly *our* doctorate. Finally, I would like to acknowledge our sweet angel, Kate. She is the inspiration behind my drive to make public education the best possible option for all children.

TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	x
CHAPTER ONE: INTRODUCTION	
Dropout Crisis	1
Alternative View of the Dropout Crisis	3
Statement of the Problem	5
Purpose of the Study	8
Research Questions and Hypotheses	12
Theoretical Underpinnings: Positive Psychology	13
Student Wellness	14
Assumptions	16
Limitations	16
Delimitations	18
Definition of Terms	18
CHAPTER TWO: LITERATURE REVIEW	
Introduction	22
Dropout Predictors	23
Academic Performance	24
Student Demographics	27
Behavioral Engagement	30

Theoretical Foundation: Positive Psychology	34
Critical Adolescent Years	37
Resilience	39
Positive Youth Development	44
Developmental Assets	46
Social Emotional Learning	47
Prevention Science	50
Student Wellness	52
Student Wellness Measurement	56
Child and Adolescent Wellness Scale (CAWS)	57
Adaptability	58
Connectedness	59
Conscientiousness	60
Emotional Self-Regulation	61
Empathy	61
Initiative	63
Mindfulness	63
Optimism	64
Self-Efficacy	65
Social Competence	66
Summary	67

CHAPTER THREE: METHODOLOGY

Introduction	69
Research Design	70
Participants and Procedures for Data Collection	72
Ethical Considerations	74
Instrumentation	76
Dependent Variables	78
Data Analysis	79

CHAPTER FOUR: RESULTS

Introduction	82
Sample Demographics	83
Descriptives and Independent Variables	86
Descriptives and Dependent Variables	88
Reliability	89
Research Hypotheses	91
Hypothesis One	91
Hypothesis Two	93
Hypothesis Three	96
Summary	120

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

Overview	121
Description of Sample	122

Descriptives and Independent Variables	123
Descriptives and Dependent Variables	123
Analysis of research Hypotheses	125
Hypotheses One and Two	125
Implications: Hypotheses One and Two	126
Hypothesis Three	128
Implications: Hypothesis Three	131
Limitations	137
Directions for Future Research	139
Conclusions	140
APPENDIX A: STUDENT PARTICIPANT ASSENT FORM	142
APPENDIX B: CAREGIVER CONSENT FORM – MIDDLE SCHOOL	144
APPENDIX C: CAREGIVER CONSENT FORM – HIGH SCHOOL	147
APPENDIX D: INSTITUTIONAL REVIEW BOARD LETTER	150
REFERENCES	152

LIST OF TABLES

Table 1.	California Cohort Data for the Class of 2009-2010	7
Table 2.	The High School Survey of Student Engagement Three Dimension of Student Engagement	31
Table 3.	Participant Demographics	85
Table 4.	Child and Adolescent Wellness Scale Domains Descriptive Statistics: All Students	87
Table 5.	Descriptive Statistics for Dependent Variables: All Students	89
Table 6.	Cronbach's Alpha Coefficients for Current Study (N = 563) and Previous Researched Levels	90
Table 7.	Pearson's Correlation Coefficient (R), Correlations Between Domains of Wellness and Academic Achievement	92
Table 8.	Pearson's Correlation Coefficient (r), Correlations Between Domains of Wellness and Behavioral Engagement	95
Table 9.	Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain Means (M) Value for Gender	98
Table 10.	Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Gender	100
Table 11.	Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain Means (M) Value, Ethnicity	102
Table 12.	Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Gender and Ethnicity	103
Table 13.	Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain Means (M) Value for Subgroups: Hispanic English Learner Students and Hispanic Non-English Learner Students	106
Table 14.	Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Hispanic English Learner (EL) Students and Hispanic Non-English Learner Students	108

Table 15.	Analysis of Variance, Child and Adolescent Wellness Scale Domain Means (M) Value for Subgroups: Hispanic SED, Hispanic Non-SED, White SED, and White Non-SED	111
Table 16.	Analysis of Variance, Behavioral Engagement Measures (M) Value for Subgroups: Hispanic SED, Hispanic Non-SED, White SED, and White Non-SED	113
Table 17.	Analysis of Variance, Child and Adolescent Wellness Scale Domain Means (M) Value for Subgroups: Grade Seven, Eight, and Nine	116
Table 18.	Analysis of Variance, Behavioral Engagement Measures (M) Value for Subgroups: Grade Seven, Eight, and Nine	118

CHAPTER ONE

INTRODUCTION

Dropout Crisis

The No Child Left Behind Act (NCLB), enacted by the United States Department of Education in 2001, mandates that all public K-12 schools who receive federal funding conform to a national accountability system in which all students must meet minimum levels of proficiency in mathematics and English-Language arts (Swanson & Chapli, 2003). Educators, parents, students, and communities have focused on the high stakes testing and academic accountability measures of NCLB. In addition to the academic measures of NCLB, high schools are subject to an additional measure of academic performance. The percentage of students graduating on time and the percent of students identified as dropouts have been integrated into the NCLB measurement process for high schools as well. One of the key intentions of the dropout component of NCLB is to ensure schools do not dismiss their lower performing students to show artificial increases in test scores and graduation rates (Swanson & Chapli, 2003). Despite the emphasis on NCLB and the academic accountability established as a result of that initiative, it is evident that more is needed in the support of students' academic performance as well as increasing the likelihood that they will stay in school. Gentry (2006) found that "despite the vigor with which accountability has been pushed and the speed with

which states have implemented high-stakes tests and high standards for all, the dropout rates in most of these states have steadily increased while graduation rates have decreased” (p. 25). American President, Barack Obama, emphasized the dropout issue in a March 2010 speech, President Obama said:

This is a problem we can't afford to accept or ignore. The stakes are too high – for our children, for our economy, for our country. It's time for all of us to come together – parents and students, principals and teachers, business leaders and elected officials – to end America's dropout crisis

The United States Department of Education's National Center for Educational Statistics (2010) provides data and statistics on many areas of public education. Included in their annual report is an indicator for Public High School Graduation Rates. According to their statistics, the average freshman graduation rate was 73.9 percent for the public school student in the class of 2007. This percentage indicates that one million public high school students, nation-wide, did not graduate on time in 2007.

The economic, as well as social costs, of dropping out of school are catastrophic. Belfield and Levin (2007) found that California acquires nearly \$50 billion in total economic losses for each group of 120,000 20-year-olds who dropout of school. In addition, high school graduates earn \$290,000 more over their lifetime compared to those who do not finish high school. Social consequences for dropouts include high rates of criminal activity, incarceration, poorer health, higher mortality rates, more reliance on welfare assistance, and

they are less likely to vote than those who have graduated high school (Belfield & Levin, 2007). Christle, Jolivet, and Nelson (2007) suggest that dropping out of school is not a single act but a progression of negative outcomes. "These negative actions include academic failure, grade retention, absenteeism, and behavioral and discipline problems" (p. 334). Finally, the dropout crisis can affect the mental and social stability of young adults including having difficulties finding and keeping a job, marriages that end in divorce, delinquency in spouse and child support, mental health problems, poor self-concept, and the likelihood of criminal records (Werner, 1996).

Alternative View of the Dropout Crisis

It is evident that academic achievement and student retention need to be understood through a more dynamic and integrated fashion. Through their work with the University of California's California Dropout Research Project, Rumberger and Lim (2008) reviewed 203 published studies encompassing 25 years of dropout research. In their work, they identified individual and institutional predictors that were linked to students dropping out. Rodriguez (2010) reviewed this research and suggested that educators need to look beyond the traditional institutional and individual research on dropping out as "some educators absolve themselves from any culpability or engage in a deficit argument that typically blames individuals, families or entire racial/ethnic groups for their condition..." (p. 19).

Understanding individual characteristics that are associated with dropping out does little to shed light on the programs of practice that both cause and could prevent students from becoming disengaged. For example, while the majority of research on dropouts has focused on identification, another area of study has been dropout prevention. Positive Youth Development (PYD) is a three decade old approach that focuses on intervening and supporting students before educational setbacks occur (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). PYD programs focus on areas such as student engagement, advisor/advisee relationships, connectedness, resiliency, youth empowerment, and wellness (Wright, Weidong, Sheng, & Pickering, 2010). Research has found that PYD programs can have a significant impact on social, emotional, and physical well-being as well as academic achievement even if their focus is not on academic standards (Catalano., Hawkins, Berglund, Pollard, & Arthur, 2002).

Preventing school dropout through PYD is a strategy in which school officials work with students to develop competencies rather than emphasizing their weakness (Christenson & Thurlow, 2004). Scales and Roehlkepartain (2003) studied ninth grade students who participated in a PYD program that consisted of team building, communication activities, social competencies training, and other related areas. Over the three years of the study, they found that the number of students who failed two or more classes decreased by 50 percent. The percent of students who failed two or more classes dropped from 18

percent to 9 percent during the study period. The Collaborative for Academic, Social, and Emotional Learning (2008) found that:

Learning environments that focus on caring student-teacher relationships, students' social and emotional needs, and high expectations result in students who perform better academically and are more likely to attend school (p.4).

The wellness construct is gaining ground as a way of proactively looking at the social and emotional characteristics that relate to achievement and could consequently serve as a model for dropout prevention. Research has suggested that wellness factors such as self-esteem and attribution style have a positive impact on academic achievement (Ciarrochi, Heaven, & Davies, 2007). Also, self-efficacy, effort, persistence, and emotional reactions have been found to be associated with academic outcomes (Zimmerman, 2000). Finally, the holistic wellness construct of hope is associated with academic achievement (Miller, Gilman, & Martens, 2008).

Statement of the Problem

California's high school students are more likely to drop out of school when they are compared to national averages. Only 70.7 percent of California's high school students graduated with their class in 2007 (Aud, et al., 2010). In California alone, approximately 150, 000 high school students do not graduate with their class annually. In 2005, nearly one in four adults (18-64 years) in

California (more than 4 million people) had not graduated from high school (Belfield & Levin, 2007). Rumberger and Arrellano (2007) found that in California only about half of all at-risk African American and Latino students graduated from high school. In many urban settings, the graduation rates are even lower. Silver, Saunders, and Zarate (2008) found that in the Los Angeles Unified School District only 48 percent of students graduate on time. Through the evaluation of 48,561 student records, they also found that only one in three students in high schools serving a high concentration of English learners reached graduation. The following table illustrates the dropout crisis in California. The most recent data from the California Department of Education describes the dropout and graduation rates of subgroups of students. The problem is that subgroups of students, male, Hispanic, English Learners, and socioeconomically disadvantaged, continue to have increased dropout rates and decreased graduation rates. Table I illustrates this problem.

Table 1

California Cohort Data for the Class of 2009-2010

Subgroup	Cohort Students (N)	Cohort Graduates (N)	Cohort Graduation Rate	Cohort Dropouts (N)	Cohort Dropout Rate
Statewide	519,247	386,222	74.4	94,312	18.2
Male	265,961	187,386	70.5	55,257	20.8
Female	253,286	198,836	78.5	39,055	15.4
Hispanic/Latino	238,607	161,607	67.7	54,033	22.7
White	156,469	130,417	83.4	18,301	11.7
English Learners	96,431	52,244	56.3	29,947	31.1
Socioeconomically Disadvantaged	307,555	208,830	67.9	66,994	21.8

Note. California Department of Education, Educational Demographics Unit, 2010, Retrieved from <http://dq.cde.ca.gov/dataquest/>.

In conducting a review of the research on predictors of students dropping out of school, several variables were identified. Predictors of school dropouts include research on student's attitudes, behaviors, school performance, engagement, and prior experience. Also, individual factors such as race, socio-economic status, sex, and achievement have been linked to dropping out (Rodriguez, 2010). According to the Education Longitudinal Study of 2002, the top two reasons tenth graders reported dropping out of school were poor attendance and getting poor grades/failing school. Also, nearly 50 percent of students surveyed in California reported poor attendance and poor grades as

contributing to their choice of dropping out (Rotermund, 2007). Finn and Rock (1997) found that lack of academic resiliency and engagement in school can also be predictive of dropping out.

Though the research points to specific predictors of dropping out, others have suggested that dropping out of school is a process (Christenson & Thurlow, 2004; Rodriguez, 2010). The decision to leave school is not an isolated event but a decision that a student makes over several years. Christenson and Thurlow (2004) found "that leaving school early is the outcome of a long process of disengagement from school; dropout is preceded by indicators or withdrawal (e.g., poor attendance) or unsuccessful school experiences (e.g., academic or behavioral difficulties) that often begin in elementary school" (p. 37). Overall, the problem with studies on dropping out is the limited focus on documenting the processes that precede the risk behavior. Furthermore, there is limited current research that has addressed these processes for specific subgroup populations. Research on wellness and its domains might prove to be a useful way of exploring those factors that precede dropping out by emphasizing positive social and emotional strengths. These positive strengths can potentially mediate risk behaviors and prevent the likelihood of dropping out.

Purpose of the Study

Researchers have identified predictive variables that are associated with students dropping out of school including educational performance, behaviors,

test scores, and grade point average. These variables include individual as well as institutional factors. Predictive variables that simply measure individual characteristics such as attendance and academic performance do not provide an explanation of the process of dropping out in a manner that sheds light on preventative programs of practice. In addition, the research conducted on predictive factors does not explain why some students who fall into these at-risk categories do not drop out. In fact, many students have successful school experiences and graduate on time irrespective of their at-risk label.

The purpose of this study was to investigate the role that wellness plays in relation to previously identified variables that have been predictive of students who dropout. These variables include student engagement constructs such as academic achievement and behavioral tendencies in school. More specifically, the focus of this study was to determine if there was a significant relationship between those variables that have been shown to predict dropouts and ten domains on wellness as summarized by the Child and Adolescent Wellness Scale (CAWS) among seventh, eighth and ninth grade students. Limited research has investigated the relationship between academic achievement among middle grade children and the wellness construct, while also exploring wellness from the perspective of ethnicity, socioeconomic status, gender, and grade level. Recent research on the domains of wellness has shown promise in this area. Hollingsworth (2009) examined the relationship between a Five Factor Wellness Lifestyle Inventory and academic achievement in elementary school

age children. She found a significant correlation between the students' academic success, as measured by standardized tests and wellness domains. She concluded, "Findings suggest that attending to the wellness of children could promote academic achievement and could foster social change by contributing to increases in high school graduation rates..." (Hollingsworth, 2009, p. 97). This researcher suggested that future wellness studies should investigate "lurking" variables such as socio-economic status, language proficiency, or other student characteristics.

Current research has also focused on a wellness model of dropout prediction. Cummins-Lemon (2010) researched the relationship between wellness and dropping out by utilizing the results of the following four student surveys: Five Factor Wellness Inventory-Teenage Version, Student At-Risk Identification Scale-Student Questionnaire, the General Mattering Scale, and the Perceived Stress Scale. This researcher found a significant relationship between wellness and at-risk identification. Cummins-Lemon (2010) stated, "In addition, further studies addressing wellness in relationship to high school dropout by grade level, gender, and ethnicity would be beneficial to this area of research" (p. 91).

Finally, the evidence based Child and Adolescent Wellness Scale (CAWS) (Copeland, Nelson, & Traughber, 2010) has been found to be a useful tool to measure and promote positive mental health in children. The CAWS was

created to measure potential strengths and competencies in students through several domains. These domains include:

1. Adaptability
2. Connectedness
3. Conscientiousness
4. Emotional Self-Regulation
5. Empathy
6. Initiative
7. Mindfulness
8. Optimism
9. Self-Efficacy
10. Social Competence (Weller-Clarke, 2006)

The CAWS provides the opportunity to investigate the dropout process through the lens of positive assets instead of identifying deficits in students. Researchers have suggested that future research should investigate the CAWS as it relates to other variables that might support school success (Copeland, et al., 2010).

Weller-Clarke (2006) suggests that "efforts be directed at the systematic study of the associations between wellness as measured by the CAWS and outcome variables such as academic achievement" (p. 19).

Specific research including the CAWS ten domains and their relationship to student success may increase the school system's understanding of the dropout process as well as improve the system's ability to create specific

preventative interventions. With the identification of specific wellness domains related to dropping out, school counselors, psychologists, and administrators could create intervention programs to address the social and emotional needs of all students. This could lead to increased graduation rates and an overall increase in student well-being.

Research Questions and Hypotheses

The following research questions were examined in order to predict and explain which domains of wellness are significantly related to dropping out of school:

1. What are the levels of the ten domains of wellness, academic achievement, and behavioral engagement for the identified sample of students?
2. What is the relationship between the ten domains of wellness and academic achievement?
3. What is the relationship between the ten domains of wellness and behavioral engagement?
4. What percent of the variance in academic achievement and behavioral engagement can be explained by the ten domains of wellness?
5. Is there a difference in the relationship between academic achievement, behavioral engagement, and the ten domains of wellness within subgroups of students?

Along with these research questions, the following hypotheses were tested:

Hypothesis 1: There is a significant relationship between the ten domains of wellness and academic achievement.

Hypothesis 2: There is a significant relationship between the ten domains of wellness and behavioral engagement.

Hypothesis 3: There is a multivariate relationship between the ten domains of wellness, academic achievement, behavior engagement and the relationships are different amongst student subgroups.

Theoretical Underpinnings: Positive Psychology

At issue is the need for schools to address the dropout crisis from an alternate point of view. Seligman and Csikszentmihalyi (2000) argue that the science of psychology since the second World War has focused on healing and repairing damaged people. Working from a deficit model, psychologists have become experts on working with people in need. Traditionally the field of psychology has been centered on a deficient model; positive psychology takes the opposite approach. The field of positive psychology is used to frame this study as it looks at alternate variables in the identification of at-risk students. Chafouleas and Bray (2004) found that positive psychology has begun to have an influence on schools in the past ten years. They found that schools can

prevent student dropout by focusing on positive student characteristics including motivation, problem solving, and persistence.

The field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction; hope and optimism; and the flow of happiness. At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skills, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom (Seligman & Csikszentmihalyi, 2000, p. 5).

The idea that protective factors could be identified as mediators to dropping out can be understood through the construct of positive psychology. This can be accomplished by using prevention models such as wellness that are focused on more than academics (Rumberger & Arellano, 2007).

Student Wellness

Howard, Dryden, and Johnson (1999) suggest that implementing a traditional identification process for at-risk students through poor grades, dysfunctional behaviors, truancy, or poor test scores is problematic. According to these researchers, identifying students through a deficit model automatically suggests that these students have already begun to exhibit at-risk behaviors prior to official identification. Furthermore, they found that once these behaviors begin,

student and teacher expectations decrease and interventions are less likely to be successful.

An alternative to addressing the dropout issue through traditional, individual or institutional characteristics is to investigate children's psychological health (Weller-Clarke, 2006). Instead of focusing on at-risk traits, positive school psychologists suggest that educators should be implementing programs that center on helping students in the development of personal and social competencies. Weissberg and O'Brien (2004) found that "school-based social and emotional learning interventions can improve children's academic performance and also reduce substance use, aggression, and other risky behaviors" (p. 94). These competencies have also been found to increase levels of community and individual wellness (Gomez & Ang, 2007).

Wellness has multiple dimensions and is a continuous construct (Roscoe, 2009). Definitions of wellness include subcategories such as social, emotional, physical, intellectual, spiritual, psychological, occupational, and environmental wellness. Psychological wellness will be the construct used in this research and can be defined as "attitudes and activities which improve the quality of life and expand potential for higher levels of functioning" (Mullen, 1986, p. 34). By investigating wellness traits early in a student's middle and high school experience a school counselor, psychologist, or administrator may be able to develop appropriate interventions that address one or several of the wellness domains. These accurately identified interventions may then have a positive

impact on preventing typical at-risk behaviors that develop in the critical adolescent transitional years.

Assumptions

There are several assumptions that are included in this study. Although the sample was not randomly selected from the larger population, the first assumption is that the seventh through ninth grade sample used is representative of a similar population with similar demographics in this study area. Another assumption is that the students who completed the CAWS did so with accuracy and careful consideration to the ten domains of wellness. A final assumption is that CST-ELA and CST-Math scores are valid measures of student achievement and that attendance, suspensions, referrals are valid measures of behavioral engagement.

Limitations

This research is an examination of the ten domains of wellness and their relationship to at-risk student behaviors that may lead to dropping out of school. Findings from this study must be framed within the limitations of the research design and execution of the study. First, the researcher used a convenience sample which may restrict the generalizability of the results to the general population. Students in this study were selected and recruited from a single high school and a single middle school within the same school district. Though these

students represent a diverse student population, they may not match similar populations in surrounding school districts. Also, students have many choices for schooling including charter schools, private schools, or online learning institutions which typically enroll students with different backgrounds and experiences.

Second, these were students who were currently enrolled in grades seven through nine and who agreed to participate in the study. Additional research on those students who had left school, or access to those students that did not participate in this research, or those outliers who were excluded from the study, might present different findings or might contribute more information useful to the study. Further, when comparing subgroups by using averages, it is important to recognize that there are some students who do not reflect those categorizations of wellness, behavioral engagement and achievement. Therefore, engaging in an in-depth, contextualized design that provides rich data on those resilient characteristics within these subgroups would be essential. This exploratory correlational study design does not provide information on how programs of practice can build wellness in students, and because it is not a longitudinal study, it is unclear as to whether or not wellness precedes behavior and achievement or vice versa. Finally, the Child and Adolescent Wellness Scale used in this study is a self-reporting instrument that assumes students are participating fully by providing correct information. Though there are some limitations to this study, the information provided may help school officials identify students at-risk of dropping

out before it is too late. It may provide a framework for positive interventions prior to students engaging in those at-risk behaviors.

Delimitations

This study is not asking nor answering the research question, "What models of practice promote wellness?" The study also does not explore the interactions of other variables known to correlate with student behavior and academic achievement such as parental involvement. As a result, this study is strictly exploring whether or not wellness correlates with behavioral engagement and achievement for this diverse sample, and whether or not the wellness construct is a useful model across subgroups.

Definition of Terms

1. Academic Achievement Variables

- a. Grade point average (GPA) - Based on students' classroom grades. GPA was calculated by dividing the total number of grade points received by the total number attempted for the 2010-2011 school year.
- b. California Standards Test (CST) – Standardized achievement tests given to all California public school students annually, grades 2-11. They measure students' progress toward achieving California's state-adopted academic content standards in English–

Language Arts (ELA) and mathematics, which describes what students should know and be able to do in each grade and subject tested.

- c. Course Failure – The number of classes a student received the grade of “F” during the 2010-2011 school year.

2. Student Demographics

- a. Gender – Gender selected by a student's parent on the school enrollment form.
- b. Ethnicity – Ethnic code selected by a student's parent/guardian on the school enrollment form.
- c. Socioeconomically Disadvantaged (SED) – Students who are eligible for the free or reduced-price lunch program.
- d. English Learner students (EL) – EL students may be newly enrolled students whose primary language is not English or students who have not mastered English language proficiency in the modalities of listening, speaking, reading, and writing.

3. Behavioral Engagement – “Student conformity to classroom and school rules” (Archambault, Janosz, Morizot, & Pagani, 2009, p. 409).

- a. Attendance – Total number of days the student was absent during the 2010-2011 school year.
- b. Classroom behavior – A student's total number of behavior entries into the school's electronic data base.

4. Child and Adolescent Wellness Scale (CAWS) domains of wellness

(Copeland, et al., 2010)

- Adaptability - Designed to measure respondents' ability to negotiate difficult situations and their preparedness for change.
- Connectedness - Designed to gather information related to children's perceptions of belonging and acceptance in school, their family, and the community.
- Conscientiousness – Designed to assess a child's concern over personal choices and taking responsibility for their actions.
- Emotional self-regulation – Designed to measure the ability to control one's emotions.
- Empathy – Designed to measure altruistic behavior and prosocial responses.
- Initiative – Designed to measure a child's ability or the attitude required to begin or initiate something.
- Mindfulness – Measures individual's perceptions regarding their sense of self-awareness and intuition, as well as knowledge of their personal strengths and weaknesses.
- Optimism – Measures hope and expectations for the future.
- Self-efficacy – Measures what students believe they can do.

- Social competence – Measures empathy, assertiveness, and the ability to cooperate with others and resolve conflicts peacefully (Weller-Clarke, 2006, pp. 13-18).

CHAPTER TWO

LITERATURE REVIEW

Introduction

“No Child Left Behind” has forced schools to focus only on test scores, academic interventions, and differentiated instruction. Some educational professionals have deviated from this cycle. One such organization, founded in 1943, is the Association for Supervision and Curriculum Development (ASCD, 2009). ASCD is an educational leadership organization that advocates advancing the best practices and policies for educators. With over 170,000 members in 136 countries, ASCD is the leading K-12 curriculum community. ASCD believes that the current high-stakes accountability systems which include assessment, time structures, and instructional methods are outdated and do not work in our current educational system. If schools are to prepare students for the 21st century, they must educate the whole child. The measures of success should not just be test scores but should be based on other measures as well. These would include student safety, engagement, connectedness, social and emotional development, and appropriate academic programs. Schools must ensure that all of these components work in conjunction with academic needs. The literature review for this study examined current and seminal research in both the academic achievement of students as well as the above mentioned measures of student success. To add to the current research, this study investigated non-academic

variables to help explain the dropout crisis facing many American schools. The following literature review includes relevant research in the areas of risk factors for dropping out, theoretical foundations of positive psychology, and child and adolescent wellness factors that may decrease a child's chances of dropping out of school.

Dropout Predictors

The emphasis on academic performance and accountability has not prevented or addressed the issues associated with students dropping out. Research needs to focus on those factors that both increase student academic performance while also decreasing the likelihood they will dropout from school. Current methods for identifying students who are more likely to drop out of school consist of individual and institutional factors. Finn (1989) found that researchers are predicting with accuracy who will withdraw from school based on race, socio-economic status, and academic performance. The California Dropout Research Project (Rumberger & Lim, 2008) conducted a comprehensive review of the research conducted over the past 25 years. They found that dropout predictors included:

Individual Predictors:

- Educational performance
- Behaviors
- Attitudes

- Background

Institutional Predicators:

- Test Scores
- Grade point average
- Academic achievement in middle and elementary school
- Non-promotional school changes (students mobility) during middle and high school
- Retention – Being held back one or more grades, in elementary, middle, and high school (p.1)

The following review of dropout literature is separated into three constructs: academic performance, student demographics, and student engagement.

Academic Performance

Academic achievement has been the focus of many studies in relation to high school dropout. Rumberger and Lim (2008) found that not only did test scores predict dropouts but so did grade point averages. In their review of 389 quantitative studies of dropout predictors, they found that 60 percent of the studies correlated test scores and dropping out of school. They found that higher annual standardized test scores lowered student dropout rates, while lower scores increase dropout likelihood (Rumberger & Lim, 2008). Also, they showed that high grade point averages decreased the likelihood of dropping out. Elementary as well as middle school grades can also help predict whether a

student will complete school. However, it was also noted that standardized test scores and grades have been shown to give different results in relation to dropouts.

In general, the results are more consistent ...for grades than for test scores, which reflects the fact that test scores represent students' ability usually measured on one or two days; whereas grades reflect students' effort as well as their ability throughout the school year (Rumberger & Lim, 2008, p. 28).

Not only do poor grade point averages predict dropping out, but the number of courses failed has also been shown to increase the likelihood of dropping out in the middle school and high school years (Rumberger & Lim, 2008). Middle school success has been associated with school completion. The middle school years are critical academic years in which many students begin to head down the path of dropping out of school. Balfanz, Herzog, and Maclver (2007) researched a longitudinal data set encompassing student attendance, demographic information, courses taken, credits earned, and test data. They reviewed a sample of 12,972 students over an eight year period from grade six through one year beyond their expected graduation year. The researchers found that students who failed English or mathematics courses had a high likelihood of dropping out. In fact, only 14 percent of 6th grade students who failed mathematics and 19 percent who failed English graduated from high school.

Kurlaender, Reardon, and Jackson (2008) tracked a cohort of middle school students in three different California school districts from grade seven to their graduation year. They found that middle school academic success does strongly predict high school achievement and graduation. Middle school correlates associated with "decreased achievement in high school include grade retention, course failings, grades and test scores, and enrollment in Algebra by 8th grade" (Kurlaender, et al., 2008, p. 1).

Barrington and Hendricks (1989) followed two freshmen high school classes ($n = 651$) in order to identify characteristics of non-graduating students. They looked at variables which included standardized achievement tests, course failure, and grade point average. The research showed that grade point average was an "exceptional" predictor of dropping out of school. "When we used a grade point average of 1.7 in ninth grade as a cutoff, we could identify dropouts with 90% accuracy" (Barrington & Hendricks, 1989, p. 314). These researchers also identified a cut-off point in the area of course failure. They found that they could predict dropouts with 85% accuracy by measuring how many classes students failed. Finally, the relationship between a low score on the Iowa Achievement Test and dropping out was significant. These findings are concurrent with those of Lee and Burkham (2003). In their research of 3,840 students, they found students who dropped out of school had below a "C" average as compared with a "C+" grade point average for those who stayed in school.

Student Demographics

Several studies have investigated the dropout crisis in terms of gender, ethnicity, socioeconomic status, and English language ability. Many of these studies have shown a disparity in terms of graduation rates within these subgroups (Christenson & Thurlow, 2004). According to the National Center for Education Statistics (2002) student dropout rates are “disproportionately high for students from Hispanic, African American, Native American and low-income backgrounds...” (p. 36). Other studies have confirmed the disparity in graduate rates among subgroups. Alexander, Entwisle, and Horsey (1997) reviewed the data from the Beginning School Survey (BSS) which followed 790 first graders through their public education in Baltimore City Public Schools. The researchers identified student demographics that were highly correlated to students dropping out of school. Students who were male, socioeconomically disadvantaged, and who were a minority were more likely to drop out of school than those who did not fit into those categories. Cairns, Cairns, and Neckerman (1989) also conducted longitudinal research in which they investigated 475 students who were in seventh grade when they began the study. They found that African-American students were less likely to graduate than white students. In both ethnic subgroups, male students were more likely to drop out than female students.

Lee and Burkham (2003) used the High School Effectiveness Supplement of the National Educational Longitudinal Study of 1988 to acquire a sample of

3,840 students in nearly 200 schools. One of their three areas of focus was student background (gender, race/ethnicity, and family socioeconomic status) and how it related to students dropping out of school. Their findings indicate a relationship between race/ethnicity and dropping out. African American students were more likely to drop out along with those that classified as socioeconomically disadvantaged. Research has also found that students who receive free or reduced lunches are at an increased risk of dropping out. Christle, Jolivette, and Nelson (2007) compared student demographic data from the 20 schools with the lowest dropout rates with the 20 schools with the highest dropout rates in Kentucky. They found that students who were eligible for free or reduced lunch were more likely to drop out of school. Along with attendance rate ($r = .68$), socioeconomically disadvantaged status had the highest significant predictive value ($r = .58$) in relation to dropping out.

Zvoch (2006) examined dropout risk factors including ethnicity, impoverishment, and gender. The research was conducted with a sample of more than 20,000 students in a school district in the southwestern United States. The findings indicate that female students were less likely to dropout. Also, Latino and American Indian students dropped out at a higher rate than white students. Rumberger and Rotermund (2009) also found a disparity between ethnic groups and gender in relation to dropout rates. Through their work at the California Dropout Research project, these researchers found differences in the

Public High School Graduation rates for California by Ethnicity and Gender,
2006-2007:

Graduation Rate for All Students – 71.5%

Graduation Rate for African American Students – 59.4%

Graduation Rate for Asian Students – 91.7%

Graduation Rate for Hispanic Students – 60.3%

Graduation Rate for White Students – 79.7%

Graduation Rate for Male Students – 67.3%

Graduation Rate for Female Students – 75.8% (Rumberger & Rotermund,
2009, pp. 1-2)

Finally, English language proficiency has been found to predict dropouts. Silver, Saunders, and Zarate (2008) looked at factors associated with high school graduation in the Los Angeles Unified School District. In particular, they investigated the graduation rate of English Learner students. The researchers found that only 33% of students who were identified as not mastering the English language graduated as compared with 58% of students who had successfully tested at the English proficiency level. As shown above, a student's demographic identification may negatively affect the likelihood that they will graduate from school.

Behavioral Engagement

Student engagement is a predominant theme when understanding why students stay in school and perform well academically (Yazzie-Mintz, 2009). It is not hard to understand that engaged students perform better academically and have more positive attitudes than those who are disengaged. Research also suggests that student engagement is a significant factor in high school success. "Only 55 percent of high school students feel they are an important part of their school community. Two-thirds of students report that they are bored in class every day or in every class...Boredom is a leading reason that students leave school" (Martin & Dowson, 2009, p. 329).

Student engagement is a multidimensional construct that encompasses many student behaviors. Yazzie-Mintz (2009) supports three dimensions of student engagement which include: Cognitive/Intellectual/Academic Engagement, Social/Behavioral /Participatory Engagement, and Emotional Engagement. Table 2 defines and explains the three types of student engagement measured by the High School Survey of Student Engagement.

Table 2

The High School Survey of Student Engagement Three Dimension of Student Engagement

Dimension	Focus
Cognitive/Intellectual/Academic	Student effort, investment in work, and strategies for learning. Focus on engagement during instructional time and with instructional-related activities.
Social/Behavioral /Participatory	Students' action and participation within the school outside of instructional time, including non-academic school-based activities, and interactions with other students. Focus on student actions, interactions, and participation within the school community.
Emotional	Students' feelings of connection to their school. How students feel about where they are in school, the ways and workings of the school, and the people within the school. Focus on students' internal lives not frequently expressed explicitly in observable behavior and actions.

Note. Adapted from “Engaging the Voices of Students: A Report on the 2007 and 2008 High School Survey of Student Engagement” by Yazzie-Mintz, 2009, p. 19.

The HSSSE survey has been taken by over 300,000 students in 40 states since 2006. The HSSSE is a 30 minute survey in which "attitudes, perceptions, and beliefs of students about their work, the school learning environment, and their interaction with the school community are measured" (Yazzie-Mintz, 2009, p. 2). A main finding in this research is that behavioral engagement as well not feeling connected to anyone at school and believing that nobody cares, as reported by students, is an indicator for dropping out. Specifically, the research on the HSSSE survey indicated that truancy from school is a strong predictor on dropping out.

Most of the research on student engagement and dropping out of school focuses on behavioral engagement (Fredricks, Blumenfeld, & Paris, 2004). Jimerson, Egeland, Sroufe, and Carlson (2000) researched a sample of 177 children and their families from birth of the child through age 19. They confirmed that dropping out is a continual process in which a student withdraws from school over several years. "Thus, truancy, disciplinary problems, and failing grades in high school mark an advanced stage in the drop out process that, in many cases, began years before" (Jimerson, et al., 2000, p. 544). Finally, these authors argue for early identification prior to the development of at-risk behaviors. Alexander, Entwisle, and Horsey (1997) reviewed the data from the Beginning School Survey (BSS) which followed 790 first graders through their public education in the Baltimore City Public Schools. Findings indicate that tardiness, absences, and classroom disturbances are all correlated to dropping out of school. For

example, in their study, students who dropped out of school averaged 16 days of absences while those who graduated only averaged 10 days of absences.

Finn (1993) examined the United States Department of Education's National Educational Longitudinal Study of 1988 (NELS:88) in relation to student engagement and academic outcomes. Finn argues that "engagement in school may be viewed behaviorally—that is, whether a student feels that he/she 'belongs' in the school setting and values school-relevant outcomes" (Finn, 1993, p. 5). The results of the NELS:88 ($n= 15,737$) indicated there was a strong relationship between attendance and academic achievement. The fewer number of absences tended to predicted higher standardized test scores.

Lloyd (1976) also reviewed the relationship between student attendance and dropping out and found that 6th grade attendance can be a predictive factor for school non-completion. Rumberger and Lim (2008) found that students with increased absences were more likely to dropout and less likely to graduate. In addition, they found that there was a positive relationship between absenteeism and dropout at all levels of education including elementary, middle, and high schools. Rodriguez and Conchas (2009) also found that there is a strong association between truancy, student engagement, and dropping out of school.

Behavioral engagement also includes student delinquency in school. Barrington and Hendricks (1989) looked at variables which included days absent and negative teacher comments in permanent records. They found that students who eventually dropped out of school developed greater patterns of absenteeism

than those who graduated from high school. Also, there was a strong relationship between negative teacher comments in permanent records and future dropout. As a result, the researchers could predict dropping out with 63% accuracy when analyzing just this single variable.

In their research of 475 seventh grade students over five years, Cairns, Cairns, and Neckerman (1989) developed a model which included aggressive behavior as a predictor of dropping out of school. For both subgroups, African-American and white students, their findings strongly suggest that aggressive behavior is predictive of school withdrawal. The dropout rate for students with increased aggression and low academic performance was 63% while the dropout rate for nonaggressive and academically successful students was 3%. Overall, it has been shown that engaged students are more likely to have higher grade point averages, perform better on assessments, and drop out of school at a decreased rate as compared to disengaged students (Appleton, Christenson, & Furlong, 2008).

Theoretical Foundation: Positive Psychology

Research has identified school and student characteristics associated with student failure (Rumberger & Lim, 2008). In an in-depth qualitative analysis of two high school dropouts, Brown and Rodriguez (2009) described that dropout process as “progressive disengagement” (p. 238). Schools can work to identify students at-risk for dropping out once they see patterns of disengagement.

According to Christenson and Thurlow (2004), research in the area of school dropouts has focused on static variables. Static variables are those that cannot be manipulated by the school personnel. They include such characteristics as ethnicity, home language, and socio-economic status. Recent research has begun to focus more on alterable variables such as those in the social-emotional category. This area of dropout prevention includes initiatives seeking “to build children’s skills to make responsible decisions, manage their emotions, determine positive goals, empathize with others, and establish positive interpersonal relationships” (Copeland, et al., 2010, p. 27).

The first clinical psychologists began work in 1896 at the University of Pennsylvania (Maddoux, 2002). The first psychologists at this clinic served children who had learning or school problems. This original model of psychology followed a medical format in which the focus was on mental illness as a deficit or disease. Up until the 1960’s the common principles of psychologists included the following:

- A. Psychological disorders were analogous to biological or medical diseases and resided somewhere in the individual.
- B. The clinician’s task was to identify (diagnose) the disorder (disease) inside the person (patient) and to prescribe intervention (treatment) that will eliminate (cure) the internal disorder (disease) (Maddoux, 2002, p. 14).

Wright and Lopez (2002) suggested that in the last thirty years, psychologists have begun to transform their practices and focus on the strengths of their patients rather than their deficits. This shift in ideology encompasses the ultimate goal of positive psychology which is to optimize human capacities by focusing on individual strengths. Seligman and Csikszentmihalyi (2000) suggest that there are human strengths that mediate mental illness in people. They also suggest that future research should center on human strengths and virtues. By focusing on mental strengths, such as resilience and wellness, psychologists can help students make good decisions instead of just relying on external factors that might passively influence their lives. The ultimate goal of positive psychology is not just to heal the sick, but to help people flourish through intervention models that build on human strengths.

The University of Pennsylvania's Positive Psychology Center (2011) defines positive psychology as the scientific study of the strengths and virtues that enable individuals and communities to thrive. Positive psychology can further be broken down into three central pillars: positive emotions, positive individual traits, and positive institutions (Seligman & Csikszentmihalyi, 2000). According to Chafouleas and Bray (2004) the rationale for using positive psychology in schools is to learn more about the institution by focusing on strategies that build mastery and promote positive characteristics. Positive psychology can influence schools by focusing on identifying positive emotions and strengths. In addition, positive psychology can help determine how schools can best identify and build

those strengths in a manner that prevents the likelihood of progressive disengagement from school.

Chafouleas and Bray (2004) found that success breeds success, in that students who had academic success early in their educational careers tended to continue their success throughout school. Also, it is important to note that early intervention programs do not abruptly end during a student's academic career. "The success of introducing, implementing, and sustaining positive psychology within schools may be dependent on its early yet also sustained integration across multiple contexts" (Chafouleas & Bray, 2004, p. 4). There has been significant research in many areas of positive psychology in relation to schools. This review will focus on the critical adolescent years, resilience, positive youth development, social and emotional learning, preventative science, and student wellness.

Critical Adolescent Years

Roeser, Galloway, Casey-Cannon, Watson, Keller, and Tan (2008) stated that the adolescent years have shown to be pivotal in school achievement and well-being. Research has shown that during these critical middle years, student engagement in school may decline while emotional distress may increase. Kurlaender, Reardon, and Jackson (2008) have identified substantial predictors of student dropout in the middle school years. They found that a large number of students experience decreased academic motivation and academic achievement

in grades seven and eight. Finn and Rock (1997) found that not all students that were identified as at-risk through individual or institutional categories actually dropout of school or even perform poorly in school. Roeser, Galloway, Casey-Cannon, Watson, Keller, and Tan (2008) expressed the importance of this issue:

Thus, these years represent a developmental crossroads between life paths leading toward educational success, well-being, and productive participation in adult society on the one hand, or toward curtailed educational attainments, stress and distress, and marginalization from adult society (p.116).

Weissberg and O'Brien (2004) found that most schools serve some adolescents who may be devoid of social and emotional competencies, have mental health concerns, and engage in destructive behaviors.

Finn (1989) suggests that many schools throughout the years have implemented interventions to help curtail the dropout problem in American schools. He argues that most of these intervention programs are created out of good-natured efforts to keep students in schools or bring them back to the school setting once they had left. In his research on successful prevention programs he noted that, "Few, however, are based on a systematic understanding of the developmental process that lead individuals to withdraw completely from schooling" (Finn, 1989, p. 118). Research continues to focus on the adolescent years, "Due in large part to the simultaneous physical, psychological, and social transitions, early adolescence is a developmental period during which

vulnerability for externalizing behavior problems, such as aggression and delinquency, rises” (Loukas, Roalson, & Herrera, 2010, p. 13). The issues that are prevalent in the adolescent developmental research can be addressed through the field of positive psychology. Resilience is a concept that stems from positive psychology and it will be discussed next.

Resilience

One of the first concepts to come out of positive psychology was resiliency (Damon, 2004). The idea that a young person could overcome personal struggles or tragedies and achieve high levels of personal and/or academic success was a departure from the traditional medical model of psychology mentioned earlier. Howard, Dryden, and Johnson (1999) stated “Instead of focusing on individual deficit, the new approach focused on individual strengths and, thus; the concept of resilience emerged in the psychological literature” (p. 310). The resilient child is one that overcomes some type of adversity in their childhood and flourishes into a healthy adult. Norman Garmezy was one of the first to study resiliency in children (Whitney, Splett, & Weston, 2008). He looked at the children of schizophrenic mothers and found that most developed into successful non-schizophrenic adults. This study led to his focus on competence as a concept that could predict resiliency amongst children who had faced adversity in their lives. Masten, Garmezy, Tellegen, Pellegrini, Larkin, and Larsen (1988) further developed the idea of competence leading to resiliency. They

found that students who were successful academically, followed school rules, and socialized appropriately with their peers appeared to be more resilient than those who did not. In another seminal study, Werner (1996) followed a group of Hawaiians from their birth through ages 1, 2, 10, 18, and 32. This longitudinal study looked at many facets of resiliency:

1. The roots of resiliency in those children who successfully coped with biological and psycho-social risk factors.
2. Protective factors that aided in the recovery of troubled children and youths as they made the transition into adulthood.
3. Contrasts in the behavior and care giving environments of the resilient youngsters with that of their high risk peers of the same age and sex who had developed serious coping problems in the first two decades of life.
4. An account of the life trajectories of the high risk children in the study from birth to age 32 years (Werner, 1996, p. 47).

Werner found that resilient children tended to have a close personal link with at least one positive adult in their life. The researcher also showed that resiliency is continuous throughout life and is linked to developmental stages. Protective factors were also identified which included the size of the family (4 or less children); multiple positive caregivers during infancy, stress-free motherhood, discipline during the early years, family unity, positive peer relationships, and limited chaotic events during childhood (Howard, et al., 1999). Werner completed

the study by recognizing that the majority of children exhibited self-correcting abilities and most at-risk children had developed into productive adults (Whitney, et al., 2008).

Schools can also play a role in fostering resiliency in children. In a comprehensive review of resiliency research in schools, Howard, Dryden, and Johnson (1999) found that interventions in the school setting can have a resounding impact on the resiliency of their students. After studying resiliency in schools, Edmonds (1982) established that:

a school can create a coherent environment, a climate, more potent than any single influence-teachers, class, family, neighborhood. So potent that for at least six hours a day it can override almost everything else in the lives of children (Edmonds, 1982, p. 15).

In Bernard's study of children in a school setting (1993), the researcher identified four characteristics associated with resilient children: social competence, problem-solving skills, autonomy, and a sense of purpose and a future. The researcher also recommended that schools foster a caring environment, positive expectations, and youth participation in order for the institution of school to build resiliency in their students.

Several studies of youth resiliency have turned their focus to academic resiliency. The concept of academic resiliency refers to students "who sustain high levels of achievement motivation and performance despite the presence of stressful events and conditions that place them at risk of doing poorly in school

and ultimately dropping out of school" (Alva, 1991, p. 19). As with other research on resiliency, the researchers of academic resiliency are not focused on finding deficits in students, but on identifying protective strengths in students. One such study was conducted by Gonzalez and Padilla (1997), who focused their research on Mexican-American high school students in three California high schools. After reviewing several relationships between grade point average and student characteristics, they found that a sense of belonging to school (connectedness) was a significant predictor of academic resiliency. Along with connectedness, several studies have identified other key protective factors that are associated with academic resiliency. Martin and Marsh (2006) studied high school students in years 11 and 12 finding that there were significant correlations between self-efficacy, persistence, planning, low anxiety, and academic resiliency. Further research was conducted to identify academic resilience factors among poor and minority children. For example, student engagement has been found to be highly correlated to academic resiliency among poor and minority children (Borman & Overman, 2004; Connell, Spencer, & Aber, 1994; J. D. Finn & Rock, 1997).

As stated, student engagement has been found to be highly correlated with academic resiliency (Borman & Overman, 2004; Connell, et al., 1994; Finn & Rock, 1997). Borman and Overman (2004) looked at the academic resilience in mathematics among poor and minority students. They sought to identify individual and school characteristics that support academic resilient students at

the elementary school level. They found that a student's level of engagement, self-efficacy in mathematics, self-esteem and positive outlook on school formed a significant relationship with academic resiliency. In particular student engagement or "active participation and interest in the classroom and school are important factors for counteracting academic risk" (Borman & Overman, 2004, p. 191). They also found that resilient students formed stronger, supportive relationships with their teachers than did non-resilient students. Connell, Spencer, and Aber (1994) found that there is a relationship between resiliency, emotional and behavioral engagement, and academic outcomes including attendance, test scores, grades, retention, and suspensions rates. In their study of 6th, 7th, and 8th grade African-American students in four public middle schools, they verified a directional path that consisted of parental school involvement, more engagement, and finally better school performance. In a seminal study, Finn and Rock (1997) examined the results of the U.S. Department of Education's National Educational Longitudinal Study of 1998. They reviewed the responses of 1,803 African-American and Hispanic student respondents. Results indicated that resilient students are engaged with their learning. In particular, variables that were significant for resilient students were engagement measures "coming to class on time, being prepared for and participating in class work, expending the effort needed to complete homework and avoiding being disruptive in class" (Finn & Rock, 1997, p. 231). These results were significant even when student background and psychological characteristics

were controlled. The study of positive psychology and resiliency led to a movement that looked not only at risk behaviors, but attempted to prevent these behaviors from occurring by building on student strengths (Damon, 2004). This movement was termed positive youth development.

Positive Youth Development

The positive youth development movement has resisted traditional beliefs that students are flawed and need to be fixed. Traditional research in youth psychology has always focused on the child who has been identified as a bully, at-risk, learning disabled, juvenile delinquent, or the "mean-girl" (Damon, 2004). Practitioners of positive youth development recognize every child's strengths, interests, and talents and then build on these attributes. The youth development approach "aims at understanding, educating, and engaging children in productive activities rather than correcting, curing, or treating them for maladaptive tendencies..." (Damon, 2004, p. 15). Positive youth development has recently been brought to the school setting.

Schools can be instrumental in leading the positive youth development charge. In most states, students spend six to eight hours in school five days a week. Youth development occurs on a daily basis in schools. Whether students are facing social, emotional, vocational, or academic developmental issues, schools have the time necessary to effect positive change. Students can be positively affected by experiences they have in school. Studies have shown that

these experiences correlate to increased student resilience and positive overall development (Gomez & Ang, 2007). Skeptics of positive youth development are concerned that by focusing on such topics time will be taken away from the demands of content standards and high academic expectations (Gomez & Ang, 2007). The proponents of this movement would argue that by focusing on the school culture being positive and engaging all students, academic standards will be met. Schools focusing on the development of a positive school culture and engaging all students in positive youth development can reduce at-risk behavior and failure rates (Gomez & Ang, 2007).

Catalano, Berglund, Ryan, Lonczak, and Hawkins (2004) reviewed positive youth development programs for the United States Department of Health and Human Services. Through their work in The Positive Youth Development Evaluation project they identified 25 intervention/prevention programs that met their criteria which included addressing one or more positive youth development factors: research for people ages of six through twenty, selection of participants be general and not need based, and the research address positive youth development in at least one social domain. The researchers found that positive youth development programs significantly decreased nonconforming behavior while promoting positive behaviors. Behaviors that were curtailed were drug use, truancy, and school behavioral referrals. Positive outcomes were increased self-control, more successful peer relationships, increased self-confidence, better grades, and academic success (Benson, et al., 2006).

Developmental Assets

One group of researchers at the Search Institute separated the concept of positive youth development into 40 developmental assets. The 40 developmental assets are internal or external indicators of healthy development in students and can be thought of as protective factors that promote resiliency in adolescence (Howard, et al., 1999). The assets were developed by research and review of literature in the fields of prevention, resilience, youth development, and protection from at-risk behaviors (Roehlkepartain, Hong, & Scales, 2005). Developmental asset categories include: Support, Empowerment, Boundaries and Expectations, Constructive Use of Time, Commitment to Learning, Positive Values, Social Competencies, and Positive Identity (Benson, et al., 2006). Research has shown that there is a correlation between the number of assets students possess and at-risk behaviors, leadership, attitudes, and academic achievement. The studies on developmental assets indicate that on average, students only experience about half of the 40 developmental assets during critical developmental years (Roehlkepartain, et al., 2005).

Scales and Roehlkepartain (2003) found that not only did student perception research verify that developmental assets were relational to academic achievement, but that actual student records indicated that there is a correlation between grade point averages and developmental assets. In one study, it was found that the number of assets a student possessed was significantly linked to grade point average at correlations of .35 for female students and .45 for male

students (Scales & Roehlkepartain, 2003). These results were also predictive over time in that the number of assets a student reported was relational to their future grade point average. These researchers also found that developmental assets are more highly correlated with academic achievement than other variables such as a student's gender, family situation, social class, or ethnic identity. Overall, it has been shown that "Comprehensive, asset-based approaches to education and youth development have tremendous potential to contribute to the academic success of students from all backgrounds" (Scales & Roehlkepartain, 2003, p. 1).

Social Emotional Learning

Another area of positive psychology that looks to build on assets of students instead of deficiencies is social emotional learning. Warin and Muldoon (2009) support the concept that social emotional learning can positively affect student learning.

Traditionally, social and emotional education has been accorded low status, within a climate of accountability agendas and assessment pressure. Accordingly, the arguments ... support the need for a radical shift from a curriculum conceived in narrow academic terms to one that elevates the pro-social goals of self/social awareness..." (p. 300).

Social and emotional learning programs are intended to increase student's abilities to make conscientious choices, self-regulate their emotions, pursue

appropriate goals, apply empathy, and employ positive relationships with others. Authors suggest that programs in social emotional learning protect students from deviant behaviors while also enhancing their healthy adolescent development (Copeland, et al., 2010; Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003). These authors also note that social emotional learning has an effect on academic performance. They found that these variables were so significantly related that they developed a new term: Social, Emotional, and Academic Learning (SEAL).

These findings are also supported by the Collaborative of Academics, Social, and Emotional Learning (Payton, et al., 2008). In their 2008 report, the Collaborative of Academics, Social, and Emotional Learning conducted a meta-analysis of 317 studies involving 324,303 participants. They separated the studies into three categories: universal review, indicated review, and after school review. Universal review consisted of studies that were focused on all students not just those who had exhibited deviant behaviors. The indicated review looked at studies that were based on students who had exhibited antisocial or deviant behaviors. Finally, the after school review focused on studies that analyzed after school programs. Results from the universal cohort revealed that when control and experimental groups were compared, students involved in social emotional learning programs "demonstrated significantly enhanced social-emotional skills, attitudes, and positive social behavior, reduced conduct problems and emotional distress, and improved academic performance at post-intervention" (Payton, et

al., 2008, p. 12). Indicated review cohort results suggested that students identified as needing social emotional learning programs increased their academic performance after participating in a social emotional learning program. Twelve studies in this cohort revealed at least a mean effect size of .67 between academic achievement and participation in a social emotional learning program. Finally, students who participated in an after school social emotional learning program were likely to have increased academic performance (mean effect size = 0.17) and enhanced positive social behaviors (mean effect size = 0.41).

The Collaborative for Academic, Social, and Emotional Learning identified a core set of five teachable competencies that provide a foundation for effective development: self-awareness, social awareness, self-management, relationship skills, and responsible decision-making (Weissberg & O'Brien, 2004). Weissberg and O'Brien (2004) reviewed the effectiveness of three SEL programs at the elementary school level. First, they reviewed the Caring School Community (CSC) model. The model included teacher-whole class meetings to establish norms of behavior. Second, a peer buddy program in which younger and older students developed trust is established. Third, families were encouraged to become involved in the learning community. Finally, several whole school activities were included. Results indicate students who participated in CSC exhibited better problem-solving and social behaviors than those in the control group (Weissberg & O'Brien, 2004).

Two other SEL programs are Promoting Alternative Thinking Strategies (PATHS) and Skills, Opportunities, and Recognition (SOAR). The PATHS program is a K-6 curriculum that promotes emotional awareness, self-control, interpersonal problem-solving skills, and peer relationships. When compared with students in a control group, participants were less disruptive, less hyper-active, followed classroom rules, expressed emotions appropriately and were on task more (Catalano, et al., 2004). Results from the SOAR program indicate that students who participated in the program had increased reading and math scores along with less at-risk behaviors. Overall, SEL programs have been shown to increase academic achievement while reducing at-risk behaviors (Weissberg & O'Brien, 2004).

Prevention Science

Another area of study that emerged from the positive psychology movement was prevention science. Prevention science can be thought of as a pyramid of interventions. The base of the pyramid is universal prevention. In a school setting this would be an intervention for all students. The second level of the pyramid is selective prevention. This type of prevention is for students who have been identified as a target population based on risk factors. The third tier would be indicated prevention in which students have begun exhibiting behaviors that indicate level one or level two preventions have not been effective. In 2009, the National Research Council and Institute of Medicine added another important

component to their prevention science definition (Stormont, Reinke, & Herman, 2009). "Mental health promotion is characterized by a focus on well-being rather than prevention of illness or disorder" (Stormont, et al., 2009, p. 2). The science term of prevention science refers to the methodological rigor in which prevention is created, delivered, and assessed. Prevention science researchers would suggest that schools should seek to diminish risk factors and improve protective factors associated with increased student success socially, emotionally, and academically (Catalano., et al., 2002).

Several studies have looked at prevention science in a school setting. One example is the school mental health programs in Baltimore City Schools (Weist, Stiegler, Stephan, Cox, & Vaughan, 2010). Their intervention program followed the traditional pyramid of interventions mentioned but also added a fourth layer titled, "School Environment and Relationship Enhancement". The school mental health pyramid consisted of the following:

School Environment and Relationship Enhancement – Encompassed the learning community: students, parents/caregivers, community members, school staff

Universal Prevention – Paths to PAX: All students

Selective Prevention – Coping Power: 6 students per grade level

Indicated Prevention - Incredible Years Dinosaur School: 6 students per grade (Weist, et al., 2010, p. 92).

These researchers found that the focus on school mental health through the prevention science model had significant positive results including increased conformity in the classroom, positive relationships, social skills, understanding of peer pressure, and a sense of community.

Some have written that positive youth development and prevention science approaches to youth progress are competing agencies. Catalano, et al., (2002) argue that both fields of study have their same beginnings within the theory of positive psychology. Also, both fields of study tend to be critical of the early prevention movements as they only analyzed a single deficit in students. "Further, it appears that empirical approaches that focus on changing identified risk and protective factors in multiple domains throughout development have the most promise for success. We conclude that cooperation between the two frameworks would be the best strategy for progress in youth development" (Catalano., et al., 2002, p. 236).

Student Wellness

Miller, Gilman, and Martens (2008) investigated mental and physical wellness. One of their three constructs was to examine wellness through the lens of hope and optimism. Students who indicate increased levels of hope tend not to drop out of school and are less likely to experience harmful life events. Also, optimistic students reported being happier and more content with life than non-optimistic students (Miller, et al., 2008). One program that addresses students'

wellness through these two constructs is the Penn Optimism Program (POP). Delivered over a twelve week period, two hours per week, the program was intended to be used with small groups. Meetings one through five were intended to teach students about their own abilities to think about the reasons behind decisions they have made. Meetings six through nine taught students behavior management skills such as "problem solving, assertiveness and negotiation, countering procrastination, and decision making" (Miller, et al., 2008). The three meetings combined the cognitive and behavior management skills that left the students with a comprehensive problem-solving strategy. Findings indicate that after administering the POP, symptoms of depression as well as negative classroom behaviors decreased. POP also increased the level of optimism over a long period of time for treated students (Miller, et al., 2008).

Several studies have also targeted specific student populations. For example, Smith-Adcock, Webster, Leonard, and Walker (2008) studied how holistic group counseling could promote wellness for at-risk female students at an alternative education school. The purpose of their study was to learn the effect of a small-group counseling intervention to address wellness in a group of girls who were at risk for delinquency. The participants were ninth and tenth grade female students attending an alternative education school. Once identified, they participated in a Wheel of Wellness model which addressed: spirituality, self-direction, work and leisure, friendship, and love (Smith-Adcock, et al., 2008). Results from the group sessions indicated greater understanding of their own

personnel wellness as well as being able to set better and more achievable personal wellness goals. The students also increasingly made statements about their inner strength and verified assets in one another. Four themes emerged from the sessions including:

1. Pessimistic views of self and the world
2. Problematic relationships with family
3. Recognition of inner strength and resilience
4. Broadened view of wellness (Smith-Adcock, et al., 2008)

Based on their pre and post questionnaires and interviews, the researchers identified areas of wellness that should be addressed in group counseling sessions. They include:

- Empowering girls to understand issues of self-direction in their lives is key to addressing wellness
- Strengthening girls opportunities to connect and relate to one another
- Building upon and attending to the strengths and resilience of young women
- Connecting girls who are at risk with other girls ...may help share their sense of survival and transform it into a message of strength and resilience...(Smith-Adcock, et al., 2008)

Wellness courses have been an additional intervention attempted by schools. Wright, Weidong, Sheng, and Pickering (2010) evaluated the Teaching for Personal and Social Responsibility (TPSR) program that was delivered to two

groups of randomly selected African-American students. The goals of the TPSR program include:

Respect for the rights and feelings of others – social responsibility

Self-Motivation – persistence and effort

Self-Direction – making decisions and setting goals

Caring – helping others, leadership, and empathy (Wright, et al., 2010)

Following the implementation of the TPSR program, participants completed an evaluation and behavioral factors were assessed as well. Results indicated that there were positive outcomes in relation to the four goals of the program. Also, the program evaluation component indicated that 93% of students self-reported enhanced behavior and 80% reported they had worked on short-term goals. Results from the treatment group showed less absenteeism, tardiness, and negative behaviors from those of the control group. Findings imply that the TPSR program was successful in creating a positive learning environment while decreasing behavioral factors that lead to increased student failure.

Nelson, Campbell, Nelson, and Schnorr (2009) found that components of wellness, such as bonding and connectedness, have been addressed by implementing advisor/advisee (A/A) programs. These researchers found that students who thought more positively about the A/A program also reported being more bonded with their advisor. The students also had a more positive outlook on the "social benefits, academic progress, and parental involvement attributed to A/A participation" (Nelson, et al., 2009, p. 53). The study found that the

perceptions of these students towards the A/A relationship were a better predictor of students' perceptions of academic achievement than social benefits and parental contribution.

Student Wellness Measurement

Several researchers have developed measures to assess wellness (Roscoe, 2009). One example is the National Wellness Institute's (1983) Wellness Inventory of the Life Assessment Questionnaire (LAQ). The scale is centered on six wellness domains: social, spiritual, physical, intellectual, emotional, and occupational. The LAQ contains 100 items that are reported on a five point Likert scale. Validation research was conducted with college-age students and moderate correlations were identified between domains. Another wellness scale that has been shown to have validity with adults is the Perceived Wellness Survey (PWS) (Adams, Bezner, & Steinhardt, 1997). The PWS, a 36 item, 6 point Likert scale survey, also assesses six domains of wellness: social, spiritual, physical, intellectual, emotional, and psychological.

Two additional wellness measures include the Optimal Living Profile (OLP) and Wellness Evaluation of Life Inventory (WEL) (Roscoe, 2009). The OLP has been found to be a reliable and valid measure for the domains of the Total Person Concept (Renger, et al., 2000). The 135 item, 5 point Likert scale assessment measures the intellectual, emotional, social, spiritual, physical, and environment health of human subjects. Once again, this scale has been validated

with college-age students. The WEL measures the six categories of the Wellness Wheel developed at the University of Vanderbilt (Myers, Luecht, & Sweeney, 2004). The categories in this scale measure physical wellness, spiritual wellness, social wellness, emotional wellness, intellectual wellness, and environmental wellness. Versions of this scale utilize a 120 item, 5-point Likert scale to gain results. Though there are competing wellness scales that have been shown to be reliable and valid, all these scales measure wellness of adults. Another wellness measurement tool that has been shown to be reliable and valid is the Multidimensional Student Life Satisfaction Scale (MSLSS) (Griffin & Huebner, 2000). The MSLSS is a measure of life satisfaction as it is related to subjective well-being. The scale has 40 items and students respond to each item on a 6-point Likert scale. Scale categories for this survey include family scale, friends scale, school scale, living environment scale, and a self-scale. All of the above mentioned measures of wellness leave the school practitioner searching for specific traits of wellness that may support student achievement. The scale used in this research identifies traits of child and adolescent wellness through the use of the Child and Adolescent Wellness Scale (CAWS).

Child and Adolescent Wellness Scale (CAWS)

The CAWS was developed to measure positive attributes in the adolescent years. The survey merges the theories of positive psychology, resiliency, prevention, and social emotional learning. According to Copeland and

Nelson (2010), "The CAWS fills a gap in childhood psychological assessment; social-emotional assessment instruments used in schools typically provide information on behavioral and emotional deficits, but provide little insight into a child's adaptive qualities" (p. 27). The CAWS is also an effective measure of student overall health from a positive psychological framework. Many psycho-educational assessment models look for deficiencies. The CAWS is a positive psychological test in that "it was designed as a support instrument for psychologists and educators to use to foster resilience and predict and enhance healthy outcomes among adolescents" (Weller-Clarke, 2006, p. 1). The CAWS has been found to be valid and reliable and have a strong correlation with the Multidimensional Student's Life Satisfaction Scale (MSLSS) (Weller-Clarke, 2006). The CAWS consists of 100 items separated into 10 distinct dimensions of adolescent wellness: adaptability, connectedness, conscientiousness, emotional self-regulation, empathy, initiative, mindfulness, optimism, self-efficacy, and social competence. The ten dimensions of CAWS are reviewed below.

Adaptability

The measure of adaptability on the CAWS is designed to investigate a student's ability to handle complex situations and how they manage change. In addition, it measures how flexible students are and if they deal with acceptance. Khoshouei (2009) used the Connor-Davidson Resilience Scale with 323 university students in an attempt to evaluate a Persian translated form of the

measure. The four constructs that the scale measures are achievement motivation, self-confidence, tenacity, and adaptability. Results indicated that all four constructs in the scale were highly correlated with resiliency. Adaptation has also been associated with happiness in adults. Diener, Lucas, and Scollon (2006) reviewed the latest research and recommend alterations to the Hedonic Treadmill Theory which is an adaptation theory of well-being. These researchers found interventions that focus on adaptation could be effective in improving a person's happiness and overall well-being.

Connectedness

The connectedness measures in the CAWS take into account students' beliefs about belonging in a school setting (Copeland, et al., 2010). The connection to the family and the community are also measured in the CAWS. Research has been conclusive in the area of connectedness and its relationship to buffering negative adolescent behaviors. Loukas, Roalson, and Herrera (2010) conducted research to see if school connectedness creates a buffer against poor family relationships and delinquent behaviors at school. They surveyed 476 students in three middle schools over a two year period. They used self-reporting assessments giving the second assessment one year after the first had been administered. Results indicated that school connectedness contributed to decreased behavioral issues at school. In addition, high levels of connectedness were shown to mediate the adverse influences of negative family relations and low levels of effort.

Conscientiousness

The conscientiousness scale in the CAWS is a measure of a personality factor in which student concern about decisions and self-responsibility are measured (Copeland, et al., 2010). Conscientiousness is considered one of the big five personality factors (openness, conscientiousness, extraversion, agreeableness, and neuroticism) in the five-factor model (FFM) and has been shown to be the most consistent FFM trait associated with academic success (Eilam, Zeidner, & Aharon, 2009). Eilam, Zeidner, and Aharon (2009) studied conscientiousness and its predictive value on classroom achievement. These researchers followed a cohort of 52 eighth grade students over the course of one year. Variables for their study included grade point average, science project grade, and two self-reporting measures (NEO Revised personality Inventory or NEO-PI-R and Learning and Study Strategies Inventory or LASSI). The researchers identified a significant relationship between conscientiousness and overall grade point average as well as conscientiousness and science project grade. Of the five personality factors, conscientiousness was the only factor predictive of grade point average (adjusted $R^2 = .37$). In a similar study, Smrtnik-Vitulic and Zupancic (2011) examined elementary school student grade point average and personality traits. They found that conscientiousness and low levels of extraversion were predictive of grade point average.

Emotional Self-Regulation

Emotional self-regulation is a scale in the CAWS that measures a student's ability to control their emotions. Eisenberg, Spinrad, and Morris (2002) reviewed the relationship between emotional self-regulation, resiliency, and a child's ability to function socially. They found that higher levels of "effortful" regulation are relational to positive behaviors. Students who showed less emotional self-regulation tended to have more behavior problems. Also, findings indicate that emotional self-regulation is correlated to resiliency. Eisenberg, et al. (2002) found that "children who could regulate their attention appeared to be resilient to stress and, perhaps as a consequence, were better liked by peers and viewed as being more socially appropriate or prosocial by others" (p. 126). In a separate study, Bakracevic-Vukman and Licardo (2010) studied three groups of students. Group one consisted of 110 students ages 14-15. Group two included 116 students ages 17-18, and group three included 107 college students ages 22-23. The results of their analysis indicated that self-regulation could explain 34% of the variance of school performance in group one and 21% of the variance in group two.

Empathy

Empathy in the CAWS was included due to the fact that it is an important measure of positive youth development. Empathy can be defined as:

A multidimensional perspective, emphasizing the person's capacity for responding to others, taking into account both cognitive and affective

aspects, and highlighting the importance of the capacity to discriminate between one's own self and that of others. Empathy includes emotional responses and vicarious experiences, in other words, the capacity for distinguishing others' affective states and the ability to take both a cognitive and affective perspective with regard to others (Garaigordobi, 2009, p. 218).

Garaigordobi (2009) studied 313 students, ages 10-14. In his comprehensive study, he utilized 12 assessment instruments. Findings indicated that empathy was significantly related to student behavior. The study did find differences among gender. While prosocial behavior was positively linked to both male and female students, antisocial behavior was only correlated to empathy amongst the male participants. Thomas, Dyrbye, Huntington, Lawson, Novotny, Sloan, and Shanafelt (2007) found that empathy was also related to personal and professional stress and well-being. Their research involved 1,098 medical school students from the State of Minnesota. They used multiple measures to assess stress, empathy, and well-being. The findings indicated that empathy was inversely related to professional and personal distress. As measures of burnout increased, empathy indicators decreased. Also, empathy was associated with well-being in that the quality of life (QOL) measures positively correlated with empathy.

Initiative

The initiative construct comes from the positive youth development research (Copeland, et al., 2010). Larson (2000) stated that initiative is a core quality of positive youth development. He suggested that along with action toward a goal, intrinsic motivation and focus all lead to adolescent initiative. In his review of outcome research, Larson (2000) also found that initiative is associated "with positive outcomes, such as diminished delinquency, greater achievement, and increased self-control and self-efficacy" (p. 178). Hektner (2001) investigated predictors that would lead to adolescent development. This was a longitudinal study in which he measured students' survey responses twice, two years apart. The researcher utilized a national wide sample of 236 grade 6, 8, and 10 students. In both models, year 1 and year 3, adolescent growth was significantly related to initiative, intrinsic motivation, goal-directedness, and concentration. Finally, Hektner found that the strength of these relationships grew with age.

Mindfulness

Mindfulness on the CAWS refers to the social emotional learning experience of self-awareness (Copeland, et al., 2010). Perceptions of individual strengths and weaknesses are assessed on the CAWS as well as self-awareness and insight. The Collaborative for Academic, Social, and Emotional Learning defines self-awareness as "accurately assessing one's feelings, interests, values, and strengths; maintaining a well-grounded sense of self-confidence" (p. 6). They found that students who evaluate themselves and their

abilities sensibly are more likely to be socially and emotionally competent. Mindfulness has begun to gain attention in the child and adolescent research. Greco, Baer, and Smith (2011) have developed and validated a measure for adolescent mindfulness, the Child and Adolescent Mindfulness Measure (CAMM). Through their validation studies, they found that mindfulness in adolescents is positively correlated to quality of life and academic competence measures. Their survey was also negatively correlated with adverse outcomes such as delinquency issues.

Optimism

Optimism and hope are foundational to the study of positive psychology (Copeland, et al., 2010). Gillham and Reivich (2004) define optimism as the "tendency or disposition to expect the best" (p. 147). This definition is central to positive psychology as optimism can also be translated into the expectation of positive outcomes. The construct is also linked to self-efficacy. Hoy, Tarter, and Hoy (2006) conducted research on optimism and validated their newly identified construct of academic optimism. Their study was an attempt to show that academic optimism was associated with academic achievement even when controlling for demographic and socioeconomic variables. They reviewed the academic achievement of twelfth grade students in 96 high schools as measured by the states twelfth grade high school exit exam score. The three measures that the researchers combined into academic optimism were collective efficacy,

academic emphasis, and faculty trust in students and parents. Results indicated that academic optimism was significantly related to academic achievement.

In a related research study, El-Anzi (2005) researched academic achievement and its relationship to psychological variables including anxiety, self-esteem, optimism, and pessimism. The study included 400 male and female students in their first year of college. The measure for academic achievement was the participants' cumulative achievement average. The measure for optimism was the Arabic Scale of Optimism and Pessimism. The results indicated a positive significant relationship between academic achievement and optimism and a significant negative relationship between academic achievement and pessimism.

Self-Efficacy

Self-efficacy can be defined as "people's beliefs about their capacity to exercise control over their own level of functioning and over events that affect their lives" (Bandura, 1993, p. 118). Bandura (1993) suggested that self-efficacy thoughts are based on four major processes: cognitive, motivational, affective, and selection. Zimmerman, Bandura, and Martinez-Pons (1992) examine the relationship between students' self-efficacy beliefs and academic achievement. The researchers utilized 102 ninth and tenth grade student participants in their study. They measured student self-efficacy with the Children's Multidimensional Self-Efficacy Scales and compared the results with their expectation of the grade they would receive in a class as measured by a student survey. The results

indicated that student self-efficacy not only predicted student goal expectancy but also actual grades received in the course.

Diseth (2011) investigated the relationship between self-efficacy, goal orientation, learning strategies, and academic achievement. Participants in this study included 211 university students who were enrolled in an introductory psychology course. The variables measured by the researchers were high school grade point average, examination grades, and the results of the Motivated Strategies for Learning Questionnaire (MSLQ). Results of the path analysis indicated that high school grade point average and examination grade were associated with self-efficacy. The model which included high school grade point average and examination grade accounted for 37% of the variance in self-efficacy.

Social Competence

The CAWS measures social competence through the framework of social and emotional learning (Copeland, et al., 2010). According to Copeland, et. al (2010) social competence is a multi-dimensional model that includes "affective, cognitive, and behavioral skills that combine to determine success in interpersonal relationships" (p. 29). Wentzel (1991) studied the relationship between social competence and academic achievement in adolescents. Her research was centered on three factors of social competence that included social responsible behavior, sociometric status, and self-regulatory processes. The participants were 423 sixth and seventh grade students along with 11 of their

teachers. Academic achievement was measured by student grades. Self competence was measured through several self-reporting scales. Results support the hypothesis that grade point average was significantly correlated to the measures for socially responsible behavior and problem-solving styles. Not only is there a relationship between specific academic performance and social competence, but Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, and Elias (2003) found that "self-control or social competency programming that used cognitive-behavioral and behavioral instructional methods consistently was effective in reducing dropout and nonattendance, substance use, and conduct problems" (p. 470).

Summary

Review of literature has shown the need for and influence of positive psychology throughout the educational system. Further review of literature has also shown support for the ten domains of wellness which includes adaptability, connectedness, conscientiousness, emotional self-regulation, empathy, initiative, mindfulness, optimism, self-efficacy, social competence, and their merit as a starting point to improve students over all well being and academic achievement. These areas of wellness have been validated for their merit through individually assessed models in the United States and other countries around the world. Thus, a critical need still arises to curb the dropout issue facing the United States through recognizing the important role of understating and developing wellness.

In particular, school systems are in need of developing preventive measures to ensure that all students are supported physically, socially, emotionally, and academically as they attempt to complete school. As the penalties for schools not meeting NCLB requirements increase, schools are looking for alternative approaches to increasing student achievement while lowering dropout rates. The intent of this literature review was to set the theoretical and empirical foundations for performing this study. The purpose of the following research is to identify wellness constructs that may help direct educators in providing students the tools necessary to complete school and increase the students' overall life satisfaction.

CHAPTER THREE

METHODOLOGY

Introduction

In this age of academic accountability, schools continue to judge based on national and state academic benchmarks for student learning. With new NCLB measures, high schools have also become responsible for trying to decrease dropout rates amongst the most at-risk students. The research has shown that individual and institutional risk factors can explain large percents of the variance in student dropout rates. Research has also shown that within these high-risk groups, many students have persevered and completed school. Wellness helps explain why some students are successful and others are not. Researchers have supported a relationship between factors of wellness and student achievement. While research has addressed the relationship of individual constructs of wellness and academic achievement, the literature is lacking in the exploration of a comprehensive wellness measure. There is a need for research to investigate wellness as it relates to factors of dropping out of school. It extends current research by looking at student wellness, academic achievement, and behavioral engagement during students' critical adolescent years. Furthermore, this research is unique in that it explores these relationships at the subgroup level including gender, ethnicity, English Learner, and socioeconomically disadvantaged status. The primary purpose of this research is to empirically

explain wellness constructs and their predictive value on subgroups of students who typically would be classified as at-risk of not completing school. This chapter includes the following four sections: research design, participants and procedures for data collection, ethical considerations, instrumentation, dependent and independent variables, and data analysis.

Research Design

This research study attempts to explain the relationship between ten domains of wellness and student outcomes based on academic, behavioral, and demographic variables. Standard multiple regression was used to assess the predictability of the ten domains of wellness on academic achievement. Criterion variables for this measure were GPA, CST-Math scores, CST-ELA scores, and number of courses failed. Standard multiple regression was also used to assess the predictability of the ten domains of wellness on behavioral engagement. Criterion variables for this measure were total days absent and number of discipline referrals. The researcher was also looking for the coefficients associated with the regression equation in order to predict the wellness variable most associated with at-risk student academic and demographic characteristics. This category of exploratory, non-experimental research is critical in assisting researchers and school personnel in identifying possible predictor variables associated with at-risk dropout characteristics. The identification of wellness

constructs early on may help schools prevent and protect students from dropping out later in their school career.

The research questions and hypotheses tested included the following:

1. What are the levels of the ten domains of wellness, academic achievement, and behavioral engagement for the identified sample of students?
2. What is the relationship between the ten domains of wellness and academic achievement?
3. What is the relationship between the ten domains of wellness and behavioral engagement?
4. What percent of the variance in academic achievement and behavioral engagement can be explained by the ten domains of wellness?
5. Is there a difference in the relationship between academic achievement, behavioral engagement, and the ten domains of wellness within subgroups of students?

Along with these research questions, the following hypotheses were tested:

Hypothesis 1: There is a significant relationship between the ten domains of wellness and academic achievement.

Hypothesis 2: There is a significant relationship between the ten domains of wellness and behavioral engagement.

Hypothesis 3: There is a multivariate relationship between the ten domains

of wellness, academic achievement, behavior engagement and the relationships are different amongst student subgroups.

Participants and Procedures for Data Collection

The participants for this study were from a middle school and high school within the same unified school district in the southwestern region of the United States. The city in which the schools were located had a population of approximately 40,000 residents. The enrollment at the middle school was 767 grade 7 and 8 students at the time of data collection. The gender distribution was 50% male students and 50% female students. The researcher also collected data from grade 9 students at the only comprehensive high school in the school district. The enrollment in grade 9 was 373 students, with a gender distribution of 55% males and 45% females. The schools in this study compared very similarly demographically to the district's student demographic information. The student racial distribution for the district included 1.5% Asian students, 35.1% Hispanic students, 58.1% White students, and 1.5% African American students. Furthermore, the district sub-groups included 10% of students who were classified as English Learners (EL) and 41% of students were classified as socioeconomically disadvantaged. The participant school district was classified as Title I though all Title I funding went to the elementary schools for grade K-6 interventions.

Sample size is critical in the use of a quantitative data analysis.

Researchers consider sample size in multiple regression when they design their studies and want to control for metrics such as power, alpha level, number of predictors, and effect sizes. Tabachnick and Fidell (2007) suggest as a rule of thumb for minimum sample size for multiple regression. The sample should be equal or greater than $104 + 8m$ (m = the number of independent variables). The current study includes ten independent variables so the minimum number of participants is 184 ($104 + 8(10)$). The sample size for this study was 563 students and therefore meets the minimum number of cases. Conversely, it is also possible to have too large of sample size. "As the number of cases becomes quite large, almost any multiple correlation will depart significantly from zero, even one that predicts negligible variance in the DV" (Tabachnick & Fidell, 2007, p. 123).

Convenience sampling was utilized in this study. Participation was coordinated through the school district Superintendent, which supported the process and had a relationship with the local university. The Superintendent and both administrative bodies at the middle and high school, granted permission for this research. The researcher was allowed to recruit ninth grade students during a 30-minute presentation in Health class periods on a single day. For grades seven and eight at the middle school, the researcher was allowed to recruit students during a 30-minute presentation in their Physical Education class period on a single day. In both cases, parent consent letters were sent home with

students and teachers agreed to collect these consent forms. The school district allowed the researcher to utilize the global calling system to record a message that was sent to home phones requesting the return of the parent permission form. At the middle school, the researcher administered the surveys in Physical Education classes over a two-day period. At the high school, the researcher administered the surveys in Health classes over a two-day period. The researcher was allowed access to absent students following his initial administration to follow-up completion of the survey. The total population eligible for this study was 1140 students. The return rate was 49%. The CAWS was administered during May 2011. The researcher was also allowed access to student records including CST scores, attendance, grade point averages, discipline data, and student demographic information. The researcher accessed this information through DataDirector. The data was all collect during the summer of 2011 and was based on school year 2010-2011 information.

Ethical Considerations

Student participation in this study was voluntary and they or their guardians were free to withdraw at any time during the process of completing the surveys. The guardians' decision for their child to participate in this study did not affect their relationship with the school district or school site in any way and if they decided to withdraw their child from participation, they did so without affecting their relationship with this school or school district. There were no

physical risks associated with participating in this study. It was possible that participants could have considered some of the information personal in nature. Participants were not obligated to complete any parts of the inventory with which they felt uncomfortable. Students were told that if there was anything from the surveys that they felt they needed to talk about further, they had access to their school counselor. Students and guardians were told that the study could possibly assist schools work with families and children to help students achieve success in all of the areas of their lives. They were also advised that this study sought to identify relationships between academic success, behavioral engagement, and wellness. Furthermore, they were told that after identifying positive psychology factors the researcher intended to share the results with the schools and district office. With this information, recommendations would be made so that schools may work to develop appropriate programs that will help increase student's wellness and academic success.

All records of this study were kept private and stored in a locked file cabinet. The locked file cabinet was located in the personal office of the primary researcher. As students completed the Child Adolescent Wellness Survey, they were placed in a locked portable container, to be opened by the researcher only. Codes were used to match the information from the surveys to the child's attendance, CST scores, grade point average, course failure, discipline data, and demographic information. No information was included in reports of study

findings that would make it possible to identify participants. The researcher was the only person to have access to the records of the study.

Instrumentation

This study utilized the Child and Adolescent Wellness Scale (CAWS) (Copeland, et al., 2010) to assess the construct of student wellness. This measure was a self-reporting instrument given in a classroom setting and was appropriate for the population studied. Ten domains of wellness (adaptability, connectedness, conscientiousness, emotional self-regulation, empathy, initiative, mindfulness, optimism, self-efficacy, social competence) were measured on the CAWS and were considered the independent variables for this research. The scale was developed through collaboration in which “psychologists, counselors, teachers, administrators, university faculty, nurse, physicians, and parents of school-aged children, were asked to rank-order what they considered to be important concepts related to well-being, wellness and health in children and adolescents” (Copeland, et al., 2010, pp. 27-28). The scale used in this study was a decreased version in that it had 100 items, 10 for each domain of wellness. The CAWS is a measure given to students as a paper and pencil survey. Students complete Likert scale responses by selecting one of four choices: SD = Strongly disagree/Not at all like me, D = Disagree/Unlike me, A = Agree/Like me, and SA = Strongly agree/very much like me. Each response is assigned points with Strongly agree earning four points, Agree earning three

points, Disagree earning two points, and Strongly disagree earning one point. Several of the questions were scored based on negative reversals. An overall score for each wellness domain was computed with a maximum of 40 and a minimum of 10 for each independent variable. These scores were then divided by ten (number of question for each domain) and a mean score was assigned to each domain of wellness. An overall wellness score was assessed by adding the ten individual scores from the domains and dividing by ten.

The CAWS has been studied and shown to be a reliable instrument. Copeland, Nelson, and Traugher (2010) conducted research to explore the factors of the CAWS and assess its reliability as measure a of wellness dimensions. After construction of the survey, the authors of the CAWS administered the survey to 266 students ages 11 to 19. The researchers also gave these same students the Multidimensional Student Life Satisfaction Scale (MSLSS) which had been previously shown to be reliable and valid. The MSLSS had 40 questions and took approximately 10 minutes to complete while the original CAWS had 150 items and took 20-30 minutes to complete. Internal consistency reliability coefficients for the domains of wellness measured in the CAWS ranged from .74 to .97 for the entire CAWS model. Regression analysis revealed that the CAWS and MSLSS were highly correlated, $R = .71$, $p < .01$, $R^2 = .50$. Nelson, Jimerson, Lam, Asamsama, Wiest, Schnorr, and Wu (2010) did further analysis of the CAWs in relation to student engagement. These researchers gave the CAWS and the Student Engagement in School

Questionnaire (SEQ) to 280 ninth grade students. The SEQ measured student engagement. Student engagement has been shown to have a strong relationship with academic achievement, school completion, and student well-being (Appleton, et al., 2008). Results from this study indicate that the 10 CAWS domains were significantly related to the measures from the SEQ. In this researchers study, the CAWS had internal consistency reliability coefficients between .75 and .90.

Dependent Variables

Dependant variables for this study included academic achievement measures as well as behavioral measures. The following is a summation of the dependent variables:

Academic Achievement Variables

- a. Grade point average (GPA) - Based on students' classroom grades. GPA was calculated by dividing the total number of grade points received by the total number attempted for the 2010-2011 school year.
- b. California Standards Test (CST) – Standardized achievement tests given to all California public school students annually, grades 2-11. They measure students' progress toward achieving California's state-adopted academic content standards in English–Language Arts (ELA) and mathematics, which describes what

students should know and be able to do in each grade and subject tested.

- c. Course Failure – The number of classes in which a student received a grade of "F" during the 2010-2011 school year.

Behavioral Engagement Variables – Student conformity to classroom and school rules (Archambault, et al., 2009, p. 409)

- d. Attendance – Total number of days the student was absent during the 2010-2011 school year.
- e. School behavior – A student's total number of behavior referral entries into the school's electronic database.

Data Analysis

Prior to the use of multiple regression to explore the relationship between independent and dependent variables, descriptive analysis was conducted to assess the demographics. Descriptives included frequencies and percent of sample population categorized by gender, grade, race/ethnicity, English Learner, and socioeconomically disadvantaged status. The researcher then calculated statistics describing frequencies, means, and standard deviations for all dependent and independent variables. Following an investigation of all descriptive statistics, Cronbach alpha reliability coefficients were calculated and compared with those in prior research for the ten domains of wellness assessed through the CAWS. The Statistical Package for the Social Sciences (SPSS,

version 19) was used to conduct preliminary analysis to ensure that the data did not violate assumptions of normality, linearity, multicollinearity, and homoscedasticity. SPSS was also used to conduct the multiple regression analysis.

Once the analysis was completed in search of violations of multicollinearity and homoscedasticity, hypothesis one was assessed using multiple regression. The regression analysis attempted to show that there was a significant relationship between the ten domains of wellness and academic achievement. Standard multiple regression was used to assess the predictive values of the ten domains of wellness on grade point average, CST scores in English-Language arts and mathematics, and the number of courses failed. Tabachnick and Fidell (2007) stated, "Regression analysis are a set of statistical techniques that allow one to assess the relationship between one DV and several IVs" (p. 117). Multiple regression allows the researcher to use a complete set of independent variables (ten domains of wellness) to predict a dependent variable. In this statistical method, the independent variables are entered into the equation simultaneously. The results include individual predictors for each independent variable entered into the equation as well as a result for the entire model. In addition, multiple regression allows the researcher to assess the amount of variances each independent variable contributes to the dependent variable. Measures of significance and predictive importance can also be accessed through multiple regression.

Hypothesis two was similar to hypothesis one though this question was in relation to a significant relationship between the ten domains of wellness and behavioral engagement. Similar multiple regression measures were utilized for the testing of hypothesis two.

Hypothesis three asked if there was a multivariate relationship between the ten domains of wellness, academic achievement, behavior engagement and if relationships were different amongst student subgroups. This analysis involved similar multiple regression assessments but the participants were separated into subgroups including gender, ethnicity, English learner, and socioeconomically disadvantaged status. Once relationships were determined, the researcher analyzed the significance of the Pearson's correlation coefficient for each subgroup and compared it with the entire sample population. In addition, independent sample t-tests were used to investigate if the mean differences in subgroup population were significant.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this study was to examine the predictive value of the ten domains of wellness on academic achievement and behavioral engagement as these variables have been identified as risk indicators for dropping out of school. Along with the identification of relationships between these variables, this research sought to discover if there was a correlation between the strength of the above mentioned relationships that could be further explained by students demographic information such as ethnicity, gender, socioeconomic status, and English Learner categorization. Participants were administered the CAWS in the spring of 2011. Archival data including standardized test scores, grade point average, number of discipline referrals, attendance information, gender, socioeconomic status, ethnicity, and English Learner identification was collected in the summer of 2011. The following research questions were investigated:

Research Question 1: What are the levels of the ten domains of wellness, academic achievement, and behavioral engagement for the identified sample of students?

Research Question 2: What is the relationship between the ten domains of wellness and academic achievement?

Research Question 3: What is the relationship between the ten domains of wellness and behavioral engagement?

Research Question 4: What percent of the variance in academic achievement and behavioral engagement can be explained by the ten domains of wellness?

Research Question 5: Is there a difference in the relationship between academic achievement, behavioral engagement, and the ten domains of wellness within subgroups of students?

Along with these research questions, the following hypotheses were tested:

Hypothesis 1: There is a significant relationship between the ten domains of wellness and academic achievement.

Hypothesis 2: There is a significant relationship between the ten domains of wellness and behavioral engagement.

Hypothesis 3: There is a multivariate relationship between the ten domains of wellness, academic achievement, behavior engagement and the relationships are different amongst student subgroups.

This chapter reviews the participants sampled in the study and the results of multivariate analyses.

Sample Demographics

The target sample population for this study was grade seven, eight, and nine students in a southern California school district. A total of 578 students

completed the student assent form and returned the parent consent form. Of these participants, all completed the CAWS. Archival and demographic data was available for 100 percent of these students. Following the exclusion of 15 outliers, 563 subjects were analyzed. The outliers were determined by scores on any variable that was 3.3 standard deviations from the mean. Of the 563 participants, 251(44.6%) were males and 312 (55.4%) were females. Ninth grade students made up the majority of the sample with 273 (48.5%) participants. Seventh grade participants included 131 (23.3%) students while there were 159 (28.2%) eighth grade students. Table 3 summarizes complete demographics of the study sample.

Table 3

Participant Demographics

	Characteristic	Frequency	Percent
<i>Gender</i>			
	Male	251	44.6
	Female	312	55.4
<i>Grade</i>			
	7	131	23.3
	8	159	28.2
	9	273	48.5
<i>Race/Ethnicity</i>			
	African American	7	1.2
	American Indian	5	< 1
	Filipino	5	< 1
	Hispanic	201	35.7
	Japanese	2	< 1
	Korean	3	< 1
	Other Asian	6	1.1
	Other Pacific Islander	2	< 1
	Vietnamese	1	< 1
	White	331	58.8
<i>English Learners (EL)</i>			
	English Learner	91	16.2
	Non English Learners	472	83.8
<i>Hispanic Subgroups</i>			
	Hispanic – English Learners	81	40.3
	Hispanic – Non-English Learners	120	59.7
	Hispanic – Socioeconomic Disadvantaged	141	70.1
	Hispanic – Non Socioeconomic Disadvantaged	60	29.9
<i>White Subgroups</i>			
	White - Socioeconomic Disadvantaged	90	27.2
	White - Non Socioeconomic Disadvantaged	241	72.8
<i>Socioeconomic Disadvantaged (SED)</i>			
	Socioeconomic Disadvantaged	240	42.6
	Non Socioeconomic Disadvantaged	323	57.4

Note: N = 563

The descriptive demographic statistics indicate that the majority of students fell into only two ethnic categories which were Hispanic ($N = 201$) and white ($N = 331$). In addition, all remaining ethnic subgroups were less than 1.3 percent of the sample population. Furthermore, 40.3% of Hispanic students were identified as EL ($N = 81$) and 70.1% were identified as socioeconomically disadvantaged (SED, $N = 141$). For the white participants, 27.2% were identified as SED ($N = 90$).

Descriptives and Independent Variables

Along with student demographic information, multiple data sources were utilized in the regression equation. Independent variables included the ten domains of the CAWS while dependent variables included archival data in the area of academic achievement and behavioral engagement. The values for each domain of wellness were based on 10 questions from the CAWS. Each participant scored the 100 questions using a four point Likert scale. A greater score on the domains of the CAWS indicates a participants' increased level of wellness as measured on the self-selection scale. Scores on the wellness domains ranged from one to four. Self-efficacy ($M = 3.33$, $SD = .36$) and social competence ($M = 3.31$, $SD = .34$) had the largest mean score of the ten wellness domains. Emotional self-regulation was reported as the lowest score ($M = 2.85$, $SD = .38$). Total wellness ranged from 3.2 to 3.8 with a mean score of 3.18 ($SD = .27$) for the entire population of the study. Table 4 shows the mean (M), standard

deviation (*SD*), minimum value, and maximum value for each independent variable in the CAWS for the entire sample.

Table 4

Child and Adolescent Wellness Domains Descriptive Statistics: All Students

Wellness Domains	Minimum	Maximum	Mean	Standard Deviation
Adaptability	2.2	4	3.10	.34
Connectedness	1.8	4	3.26	.41
Conscientiousness	2.2	4	3.26	.35
Emotional Self-Regulation	1.5	3.8	2.85	.38
Empathy	2.3	4	3.23	.33
Initiative	2.1	4	3.10	.37
Mindfulness	2.1	4	3.12	.34
Optimism	2.0	4	3.23	.38
Self-Efficacy	2.0	4	3.33	.36
Social Competence	2.2	4	3.31	.34
Total Wellness	3.2	3.8	3.18	.27

Note: N = 563

Descriptives and Dependent Variables

Dependent variables in this study included academic and behavioral indicators. Academic achievement was measured by grade point average, scores on the annual California Standards Test in mathematics (CST-Math) and English-Language Arts (CST-ELA), and the number of courses a student failed during the year of the study. Grade point average (GPA) was calculated for the single year that the CAWS was administered. CST scores were also used from the same 2010-2011 school year. Course failures were counted for only the study year. Students in these grade levels were issued 12 grades for the entire year, six for the first semester and six for the second semester. Behavioral engagement measures were recorded in two areas, the number of discipline referrals and the number of days absent from school. Table 5 shows the mean (*M*), standard deviation (*SD*), minimum value, and maximum value for each dependent variable used in this research.

Table 5

Descriptive Statistics for Dependent Variables: All Students

Dependent Variables	Minimum	Maximum	Mean	Standard Deviation
Grade Point Average (GPA)	.50	4	3.17	.71
CST–Math	206	524	336.94	59.66
CST–ELA	188	536	372.14	55.09
Number of Courses Failed	0	6	.53	1.08
Number of Discipline Referrals	0	10	.79	1.46
Total Days Absent	0	27.50	6.87	5.31

Note: $N = 563$

Reliability

In the examination of the ten domains of wellness, an important procedure is to test the reliability of the instrument. In this case, the researcher examined the ten wellness domains of the CAWS to test for the scale's internal consistency. Cronbach's alpha coefficients were calculated to test for reliability. The Cronbach alpha coefficient of the scale should be above .7 to be determined reliable (Pallant, 2010). Analysis showed that the CAWS had a Cronbach alpha coefficient of .92 for this study for the total test. Copeland, Nelson, and Traugber (2010) had previously shown that the CAWS has good internal consistency, with a Cronbach alpha coefficient reported at .97. Table 6 presents

the analysis data for this studies' Cronbach alpha coefficient along with the previously researched levels for the same scale (Copeland, et al., 2010).

Table 6

Cronbach's Alpha Coefficients for Current Study (N = 563) and Previous Researched Levels.

Wellness Domain	Full Sample Study Alpha (α)	Original Norm Alpha (α)
Adaptability	.71	.75
Connectedness	.68	.85
Conscientiousness	.74	.84
Emotional Self-Regulation	.57	.83
Empathy	.63	.77
Initiative	.62	.77
Mindfulness	.78	.76
Optimism	.71	.86
Self-Efficacy	.81	.85
Social Competence	.75	.81
Overall Wellness	.92	.97

Research Hypotheses

Hypothesis One

Hypothesis one predicted that there was a significant relationship between the ten domains of wellness and academic achievement. Standard multiple regression was used to assess the predictability of the ten domains of wellness on academic achievement. Criterion variables for this measure were GPA, CST-Math scores, CST-ELA scores, and number of courses failed. Standard multiple regression analysis revealed that all academic achievement variables were significantly related to the complete CAWS model including all ten wellness domains. 12% of the variance in GPA was explained by the CAWS ($F(10,522) = 7.25, R = .34, R^2 = .12, \text{Adjusted } R^2 = .10, p < .05$). The CAWS explained 9% of the variance in CST-Math scores ($F(10,522) = 5.40, R = .30, R^2 = .09, \text{Adjusted } R^2 = .07, p < .05$) and 11% of the variance in CST-ELA scores ($F(10,522) = 6.45, R = .32, R^2 = .11, \text{Adjusted } R^2 = .09, p < .05$). Finally, the ten domains of wellness, as a complete model, explained 6% of the variance in the number of courses failed ($F(10,522) = 3.46, R = .24, R^2 = .06, \text{Adjusted } R^2 = .04, p < .05$). All models were significant and had an effect size between .24 and .34 indicating small to medium relationships. According to this data, Hypothesis one was supported. The following table illustrates the relationship between the individual domains of wellness and the academic achievement dependent variables. Table 7 is a matrix of the correlations between the individual domains of wellness, academic achievement, and behavioral engagement.

Table 7

Pearson's Correlation Coefficient (r), Correlations Between Domains of Wellness and Academic Achievement.

Wellness Domains	GPA	CST-Math	CST-ELA	Number of
				Course Failed
	(r)	(r)	(r)	(r)
Adaptability	.08*	.14*	.15*	-.06
Connectedness	.19*	.15*	.08*	-.03
Conscientiousness	.25*	.22*	.19*	-.16*
Emotional Self-Regulation	.06	.12*	.08*	-.02
Empathy	.16*	.10*	.23*	-.12*
Initiative	.16*	.20*	.22*	-.10*
Mindfulness	.18*	.20*	.16*	-.07*
Optimism	.22*	.23*	.21*	-.11*
Self-Efficacy	.27*	.24*	.20*	-.15*
Social Competence	.18*	.11*	.14*	-.12*
Total Wellness	.23*	.22*	.22*	-.12*

* $p < .05$

Individual wellness domains and their relationship with academic outcomes indicate that there is a correlation amongst nearly all domains of wellness and academic attainment. The data suggest the strongest relationships

were with conscientiousness and GPA ($\alpha = .05$, $(r(563) = .25, p < .05)$), CST-Math ($\alpha = .05$, $(r(563) = .22, p < .05)$), and number of courses failed ($\alpha = .05$, $(r(563) = -.16, p < .05)$). As wellness increases in these areas, so does GPA and CST-Math. Conversely, as wellness increases for students, number of courses failed decreases. Empathy has the strong correlation with CST-ELA ($r(563) = .23, p < .05$). This analysis suggests that schools that are able to focus on and build wellness capacity in their students would see greater results in all areas of academic achievement.

Hypothesis Two

Hypothesis two suggested that there was a significant relationship between the ten domains of wellness and constructs of behavioral engagement. Standard multiple regression was utilized to find the predictive value of the ten domains of wellness on behavioral engagement. Criterion variables for this measure were total days absent and number of discipline referrals during the 2010-2011 school year. Standard multiple regression analysis revealed that all behavioral engagement variables were significantly related to the complete CAWS model including all ten wellness domains. 7% of the variance in total days absent was explained by the CAWS ($F(10,522) = 3.89, R = -.26, R^2 = .07$, Adjusted $R^2 = .05, p < .05$). That is as wellness increases, total days absent decreases. The CAWS also explained 7% of the variance in number of behavioral office referrals ($F(10,522) = 3.82, R = -.25, R^2 = .07$, Adjusted $R^2 = .05, p < .05$). Both models were significant and had an effect size of .26 and .25

indicating a small correlation. Furthermore, the study included an investigation into the correlation between individual domains of wellness behavioral engagement. Table 8 is a matrix of the correlations between the individual domains of wellness and behavioral engagement.

Table 8

Pearson's Correlation Coefficient (r), Correlations Between Domains of Wellness and Behavioral Engagement.

Wellness Domains	Number of Discipline Referrals (<i>r</i>)	Total Number of Days Absent (<i>r</i>)
Adaptability	-.09*	-.05
Connectedness	-.16*	-.19*
Conscientiousness	-.15*	-.14*
Emotional Self-Regulation	-.21*	-.16*
Empathy	-.12*	-.12*
Initiative	-.03	-.04
Mindfulness	-.12*	-.15*
Optimism	-.16*	-.17*
Self-Efficacy	-.16*	-.19*
Social Competence	-.15*	-.15*
Total Wellness	-.18*	-.18*

$p < .05$

Individual wellness domains and their relationship with behavioral outcomes indicate that there is a correlation amongst nearly all domains of

wellness and behavioral engagement. The data suggests the strongest inverse relationships between individual domains of wellness and with number of behavioral referrals were total wellness ($\alpha = .05$, $(r(563) = -.18, p < .05)$) and emotional self-regulation ($\alpha = .05$, $(r(563) = -.21, p < .05)$). The higher students scored in these areas, the less likely they were to receive discipline referrals to the office. In addition, the strongest inverse correlations identified between wellness and total days absent were connectedness ($\alpha = .05$, $(r(563) = -.19, p < .05)$) and self-efficacy ($\alpha = .05$, $(r(563) = -.19, p < .05)$). The data suggests that children are more likely to attend if they feel confident about the educational process and are connected to the school. Individual domains of wellness did not further explain the variance in academic achievement and behavioral engagement beyond the total wellness model.

Hypothesis Three

Hypothesis three suggested there was a relationship between the ten domains of wellness, academic achievement, and behavioral engagement. It also suggested that the relationships were different amongst some student subgroups. Standard multiple regression was utilized to consider the relationships between subgroups in the areas of wellness, academic achievement, and behavioral engagement. Independent-samples *t*-tests were first used to evaluate whether the mean was significantly different for subgroups where there were only two groups. An analysis of variances was used to

compare subgroups that had more than two categories. These subgroups included gender, ethnicity, English Learner (EL) and socioeconomic (SED) status.

Gender. The first subgroup to be analyzed was male and female participants. Table 9 illustrates the mean (*M*) value for each independent variable in the CAWS in relation to gender using independent-samples *t*-tests.

Table 9

Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain

Means (M) Value for Gender

	Male	Female
Wellness Domains	(N = 251)	(N = 312)
	(M)	(M)
Adaptability	3.09	3.11
Connectedness	3.24	3.28
Conscientiousness	3.24	3.29
Emotional Self-Regulation	2.87	2.84
Empathy	3.14*	3.30*
Initiative	3.11	3.08
Mindfulness	3.13	3.12
Optimism	3.22	3.24
Self-Efficacy	3.32	3.33
Social Competence	3.26*	3.36*
Total Wellness	3.16	3.19

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated that $p > .05$ and therefore the data did not violate the assumption of equal variances. Significant mean differences were identified between male and female students in the areas of

empathy and social competence. Male participants had a mean score of 3.14 ($t(251) = 5.82, p < .05$) for the domain of empathy and female students' mean score was 3.30 ($t(312) = 5.82, p < .05$). In addition, female mean scores for social competence was 3.36 ($t(312) = 3.49, p < .05$) while male mean score was 3.26 ($t(251) = 3.49, p < .05$).

Hypothesis three also suggested that there was a difference in the mean scores in the areas of academic achievement and behavioral engagement between subgroups. Table 10 illustrates the mean (M) value for dependent variables in the areas of GPA, CST scores, courses failed, attendance, and behavioral data using independent-samples t -tests.

Table 10

Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Gender

	Male (N = 251)	Female (N = 312)
Dependent Variables	(M)	(M)
Grade Point Average	3.01*	3.31*
CST – Mathematics	338.18	335.95
CST – English-Language Arts	364.91*	377.96*
Number of Courses Failed	.70*	.39*
Number of Discipline Referrals	.94*	.67*
Total Days Absent	6.80	6.92

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated that the assumption of equal variances were violated for GPA, course failure, and discipline referrals between male and females students ($p < .05$). As the assumption of equal variance was violated for these variables, the researcher used Welch's and Brown-Forsythe's robust tests of equality of means as an alternative test of variance. Data suggests that male students have significantly lower GPA ($M = 3.01$, $t(251) = 4.97$, $p < .05$), lower CST-ELA scores ($M = 364.91$, $t(251) = 2.81$, $p < .05$), more courses failed ($M = .70$, $t(251) = -3.23$, $p < .05$), and more discipline

referrals ($M = .93$, $t(251) = -2.15$, $p < .05$) than female students. Clearly, the females in this sample are outperforming male students in both achievement and behavioral engagement. One possible explanation may be that females are significantly higher than males in empathy and social competence. Suggestions for programs of practice that can focus on empathy and social competence will be framed in chapter five.

Further analysis included standard multiple regression to assess the predictability of the ten domains of wellness on academic achievement and behavioral engagement as measured by subgroup identification. Wellness did not further explain the variance in academic achievement and behavioral engagement within this identified subgroup beyond the total wellness model for the entire population. Results suggest that wellness is an equally important construct for both female and male students.

Ethnicity. Table 11 illustrates the mean (M) value for each independent variable in the CAWS in relation to ethnic subgroups using independent-samples t -tests.

Table 11

Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain

Means (M) Value, Ethnicity

	White (N = 331)	Hispanic (N = 201)
Wellness Domains	(M)	(M)
Adaptability	3.11	3.07
Connectedness	3.28	3.22
Conscientiousness	3.27	3.24
Emotional Self-Regulation	2.87	2.88
Empathy	3.25	3.19
Initiative	3.11	3.08
Mindfulness	3.13	3.11
Optimism	3.25	3.20
Self-Efficacy	3.34	3.30
Social Competence	3.32	3.29
Total Wellness	3.19	3.15

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated that $p > .05$ and therefore the data did not violate the assumption of equal variances. No significant mean

differences were identified between Hispanic and white students relative to the domains of wellness.

Hypothesis three also suggested that there was a difference in the mean scores in the areas of academic achievement and behavioral engagement between ethnic subgroups. Table 12 illustrates the mean (*M*) value for dependent variables in the areas of GPA, CST scores, courses failed, attendance, and behavioral data using independent-samples *t*-tests.

Table 12

Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Gender and Ethnicity

Dependent Variables	White (<i>N</i> = 331) (<i>M</i>)	Hispanic (<i>N</i> = 201) (<i>M</i>)
Grade Point Average	3.26*	3.00*
CST – Mathematics	341.71*	326.91*
CST – English-Language Arts	381.01*	356.46*
Number of Courses Failed	.40*	.78*
Number of Discipline Referrals	.69	.93
Total Days Absent	6.97	6.77

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated the assumption of equal variances was violated for CST-ELA and course failures between white and Hispanic students ($p < .05$). As the assumption of equal variance was violated for these variables, the researcher used Welch's and Brown-Forsythe's robust tests of equality of means as an alternative test of variance. Results indicated that Hispanic students were more likely to have lower GPA ($M = 3.00$, $t(201) = -4.18$, $p < .05$), lower CST-Math scores ($M = 326.91$, $t(201) = -2.83$, $p < .05$), CST-ELA ($M = 356.46$, $t(201) = -4.36$, $p < .05$) scores, and fail more classes ($M = .78$, $t(201) = 3.35$, $p < .05$) than white students. Behavioral engagement means were not significantly different between Hispanic and white students. Though academic achievement was significantly different between Hispanic and white students, behavioral engagement and wellness was not. Wellness and behavioral engagement were not significantly different between Hispanic and white students but academic performance was different, this suggests that there are other factors contributing to these academic differences. This will be discussed in chapter five.

Further analysis included standard multiple regression to assess the predictability of the ten domains of wellness on academic achievement and behavioral engagement as measured by subgroup identification. Wellness did not further explain the variance in academic achievement and behavioral engagement within this identified subgroup beyond the total wellness model for the entire population. Results suggest that wellness is an equally important

construct for both Hispanic and white students. One might have made assumptions in the past that differences in academic achievement between ethnic subgroups were attributed to differences in behavior. That is, minorities have been inaccurately understood through a deficit model of negative behaviors. The results of this study defy this assumption which leads towards the absolute necessity of recognizing the role the school must play in closing the achievement gap without attributing the problem through the lens of negative behaviors. This will be further discussed in chapter 5.

Ethnicity and English Learner (EL) Status. Further exploration was conducted to find the difference in Hispanic student outcomes based on their EL status. In the sample, 91 students were identified as EL and of those 81 were Hispanic students (89%). 120 Hispanic students were classified as non-EL. Table 13 illustrates the mean (*M*) value for each independent variable in the CAWS in relation to Hispanic and EL classification.

Table 13

Independent-Samples t-tests, Child and Adolescent Wellness Scale Domain Means (M) Value for Subgroups: Hispanic English Learner Students and Hispanic Non-English Learner Students

Wellness Domains	Hispanic Students	
	Hispanic EL (N= 81) (M)	Hispanic Non-EL (N = 120) (M)
Adaptability	3.08	3.06
Connectedness	3.22	3.22
Conscientiousness	3.25	3.23
Emotional Self-Regulation	2.83	2.83
Empathy	3.12*	3.24*
Initiative	3.05	3.10
Mindfulness	3.13	3.11
Optimism	3.21	3.20
Self-Efficacy	3.28	3.31
Social Competence	3.24	3.32
Total Wellness	3.14	3.16

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated that $p > .05$ for all measures therefore the data did not violate the assumption of equal variances. The single significant mean difference between Hispanic EL and Hispanic non-EL students was identified in the wellness domain of empathy. Hispanic EL students had a mean score of 3.12 ($t(81) = -2.49, p < .05$) and Hispanic non-EL students had a mean score of 3.24 ($t(120) = -2.49, p < .05$) for empathy indicating that Hispanic non-EL students were more empathic than their EL counterparts. Table 14 illustrates the mean (M) value for dependent variables in the areas of GPA, CST scores, courses failed, attendance, and behavioral data using independent-samples t -tests.

Table 14

Independent-Samples t-tests, Dependent Variables Mean (M) Values by Subgroups: Hispanic English Learner (EL) Students and Hispanic Non-English Learner Students

Dependent Variables	Hispanic Students	
	Hispanic EL (N= 81) (M)	Hispanic Non-EL (N = 120) (M)
Grade Point Average	2.81*	3.13*
CST – Mathematics	320.62	331.15
CST – English-Language Arts	339.57*	367.86*
Number of Courses Failed	1.17*	.51*
Number of Discipline Referrals	1.01	.87
Total Days Absent	6.47	6.98

* Significantly different mean amongst subgroups, $p < .05$

Levene's test for equality of variance indicated that $p > .05$ for all but number of courses failed therefore the data did not violate the assumption of equal variances. As the assumption of equal variance was violated for this variable (Levene's test, $p = .00$), the researcher used Welch's and Brown-Forsythe's robust tests of equality of means as an alternative test of variance. Significant mean differences were identified in three dependent variables

including GPA, CST-ELA, and number of courses failed. Hispanic non-EL students had significantly higher GPA ($M = 3.13$, $t(120) = -3.09$, $p < .05$) than Hispanic EL students ($M = 2.81$, $t(81) = -3.09$, $p < .05$). In addition, Hispanic non-EL students score significantly higher on the CST-ELA ($M = 367.86$, $t(81) = -4.232$, $p < .05$) than Hispanic EL students ($M = 339.57$, $t(120) = -4.23$, $p < .05$). Finally, Hispanic EL students failed more classes ($M = 1.17$, $t(81) = 3.35$, $p < .05$) than Hispanic non-EL students ($M = .51$, $t(120) = 3.35$, $p < .05$). Overall, only one significant mean difference was identified in wellness (empathy) though all academic achievement outcomes were found to be significantly different. This data suggests that moderating variables beyond wellness may account for the variances in academic achievement. In addition, though academic achievement was significantly different between groups, behavioral engagement was not. This finding may suggest that poor performance academically does universally correlate to poor behavioral engagement.

Further analysis included standard multiple regression to assess the predictability of the ten domains of wellness on academic achievement and behavioral engagement as measured by subgroup identification. Wellness did further explain the variance in CST-Math for Hispanic EL students ($F(10,70) = 2.13$, $R = .48$, $R^2 = .23$, Adjusted $R^2 = .12$, $p < .05$) and GPA for Hispanic non-EL students ($F(10,109) = 2.78$, $R = .45$, $R^2 = .20$, Adjusted $R^2 = .13$, $p < .05$) when compared with the wellness model for the entire population. Results suggest that

wellness is an equally important construct for both Hispanic EL and Hispanic non-EL students.

Ethnicity and Socioeconomic Disadvantaged (SED) Status. One-way analysis of variance (ANOVA) was used to evaluate the significant difference between white and Hispanic students in the area of SED. In this study, ANOVA was used to determine the mean differences on the wellness domains for four categories of participants including Hispanic-SED, Hispanic non-SED, white SED, and white non-SED. Table 15 illustrates the mean (*M*) value for the CAWS utilizing an ANOVA for this subgroup of students.

Table 15

Analysis of Variance, Child and Adolescent Wellness Scale Domain Means (M)

Value for Subgroups: Hispanic SED, Hispanic Non-SED, White SED, and White Non-SED

Wellness Domains	Hispanic	Hispanic	White	White
	SED (N = 141) (M)	Non-SED (N = 60) (M)	SED (N = 90) (M)	Non-SED (N = 241) (M)
Adaptability	3.04*	3.15*	3.07	3.13
Connectedness	3.21	3.27	3.09*	3.35*
Conscientiousness	3.23	3.27	3.16*	3.32*
Emotional Self-Regulation	2.81	2.86	2.76*	2.90*
Empathy	3.16*	3.28*	3.22	3.26
Initiative	3.07	3.10	3.00*	3.15*
Mindfulness	3.10	3.14	3.04*	3.16*
Optimism	3.20	3.20	3.15*	3.28*
Self-Efficacy	3.28	3.34	3.21*	3.39*
Social Competence	3.27	3.34	3.27	3.35
Total Wellness	3.14	3.19	3.10*	3.23*

* Significantly different mean within ethnic subgroups, $p < .05$

The homogeneity of variance, as measured by the significance of Levene's test ($p < .05$) ranged from .14 (self-efficacy) to 1.00 (empathy). Therefore, the ANOVA did not violate the assumption of homogeneity of variance. Results of the one-way between-groups ANOVA indicate many significant difference at the $p < .05$ level in the domains of wellness. Post-hoc comparisons using the Turkey HSD test indicated that the means were significantly different for Hispanic SED students ($M = 3.04$, $F(141) = 2.83$, $p < .05$) and Hispanic non-SED students ($M = 3.15$, $F(60) = 2.83$, $p < .05$) in the domain of adaptability. Significant differences for Hispanic SED students ($M = 3.16$, $F(141) = 3.24$, $p < .05$) and Hispanic non-SED students ($M = 3.28$, $F(60) = 3.24$, $p < .05$) were also identified in empathy. Post-hoc comparisons using the Turkey HSD test also suggested that white SED students and white non-SED students had significantly different means in eight areas of wellness. The largest mean differences were found in connectedness ($Mdf = .26$, $F(331) = 9.45$, $p < .05$) and self-efficacy ($Mdf = .18$, $F(331) = 6.70$, $p < .05$) for these two groups. The results indicated that students of poverty report that there is less of a connection with school and that they might not believe in their academic potential in the school setting. Overall, white SED students scored lowest on seven of the individual domains of wellness as well as total wellness when compared with the three other categories of students.

One-way analysis of variance (ANOVA) was further used to evaluate the significance of mean difference between participants in the area of academic

achievement and behavioral engagement. Table 16 illustrates the mean (*M*) value for subgroups of students, including ethnicity and SED, on the academic achievement and behavioral engagement measures.

Table 16

Analysis of Variance, Behavioral Engagement Measures (M) Value for Subgroups: Hispanic SED, Hispanic Non-SED, White SED, and White Non-SED

Dependent Variables	Hispanic	Hispanic	White	White
	SED (<i>N</i> = 141)	Non-SED (<i>N</i> = 60)	SED (<i>N</i> = 90)	Non-SED (<i>N</i> = 241)
Grade Point Average	2.92*	3.16*	2.89*	3.40*
CST – Mathematics	322.79*	336.58*	320.01*	349.81*
CST – English-Language Arts	350.07*	371.47*	363.86*	387.41*
Number of Courses Failed	.89*	.52*	.81*	.24*
Number of Discipline Referrals	.96	.85	1.20*	.50*
Total Days Absent	6.88*	6.51*	8.76*	6.30*

* Significantly different mean amongst subgroups, $p < .05$

The homogeneity of variance, as measured by the significance of Levene's test ($p < .05$) ranged from .00 (number of courses failed and number of discipline referrals) to .08 (CST-Math). GPA, CST-ELA, number of courses failed, number of discipline referrals, and total days absent all violated the homogeneity

of variance assumption. As the assumption of equal variance was violated for these variables, the researcher used Welch's and Brown-Forsythe's robust tests of equality of means as an alternative test of variance. Post-hoc comparisons using the Turkey HSD test indicated that the means were significantly different in all areas of academic achievement and behavioral engagement for Hispanic SED students and Hispanic non-SED students with the exception of number of behavioral referrals. Results indicated that Hispanic SED students had lower GPA ($M= 2.92$, $F(141) = 20.16$, $p < .05$), lower CST-Math scores ($M = 322.79$, $F(141) = 9.45$, $p < .05$), lower CST-ELA scores ($M= 350.07$, $F(141) = 15.52$, $p < .05$), and more days absent ($M= 6.88$, $F(141) = 4.87$, $p < .05$) when compared to Hispanic non-SED students. Overall results indicate that white SED students and Hispanic SED students scored significantly lower in academic achievement and behavioral engagement when compared to their non-SED counterparts.

Further analysis included standard multiple regression to assess the predictability of the ten domains of wellness on academic achievement and behavioral engagement as measured by subgroup identification. Significant relationships were found between students in the area of academic and behavior variables in a model that included all ten domains of wellness for SED students with the exception of Hispanic non-SED students. The strongest correlation with Hispanic SED and white SED students was that wellness explained 19% of the variance in GPA for Hispanic SED students ($F(10,130) = 2.98$, $R = .43$, $R^2 = .19$, Adjusted $R^2 = .12$, $p < .05$). The total model of wellness also explained 25% of

the variance in GPA for white SED students ($F(10,79) = 2.58, R = .50, R^2 = .25, \text{Adjusted } R^2 = .15, p < .05$). The strength of these relationships accounted for more of the variance than the model that included the entire sample population. The overall comparison between SED students and non-SED students suggests that wellness is not significantly different for Hispanic students in this subgroup, but is significantly different for white students. Also, SED students and non-SED students significantly differ in academic achievement and in some cases behavioral engagement. SED students may not have the same amount of cultural capital as those students who are not from poverty and therefore are not as equipped to handle the school culture as this culture fits with a middle and upper class model.

Grade Level. One-way analysis of variance (ANOVA) was used to evaluate the mean difference significance between participants in grades seven, eight, and nine and their scores on the CAWS. In this study, ANOVA was used to evaluate the mean differences on the wellness domains for three grade levels. Table 17 illustrates the mean (M) value for grade seven, eight, and nine students on the CAWS utilizing an ANOVA.

Table 17

*Analysis of Variance, Child and Adolescent Wellness Scale Domain Means (M)**Value for Subgroups: Grade Seven, Eight, and Nine*

Wellness Domains	Grade 7 N = 131	Grade 8 N = 159	Grade 9 N = 273
Adaptability	3.11	3.15	3.07
Connectedness	3.31*	3.32*	3.20*
Conscientiousness	3.28*	3.33*	3.22*
Emotional Self-Regulation	2.92*	2.89*	2.80*
Empathy	3.22	3.27	3.21
Initiative	3.07*	3.21*	3.04*
Mindfulness	3.15*	3.18*	3.08*
Optimism	3.24*	3.29*	3.19*
Self-Efficacy	3.34*	3.39*	3.29*
Social Competence	3.31	3.33	3.30
Total Wellness	3.20*	3.23*	3.14*

* Significantly different mean amongst subgroups, $p < .01$

The homogeneity of variance, as measured by the significance of Levene's test ($p < .05$) ranged from .11 (empathy) to .95 (self-efficacy). Therefore, the ANOVA did not violate the assumption of homogeneity of variance. Post-hoc comparisons using the Turkey HSD test indicted that the means were

significantly different in eight areas of academic achievement and behavioral engagement for all identified subgroups including seventh, eighth and ninth grade students. Overall results indicate that the domains of wellness including connectedness, conscientiousness, initiative, mindfulness, optimism, self-efficacy, and total wellness suggest that wellness increases from seventh to eighth grade and then decrease from eight to ninth grade. Mean scores for total wellness included 3.20 ($F(131) = 6.37, p < .05$) for seventh grade, 3.23 ($F(159) = 6.37, p < .05$) for eighth grade, and 3.14 ($F(273) = 6.37, p < .05$) for ninth grade students. The wellness domain of emotional self-regulation tended to decrease as students increased grade levels. This transition from low levels of wellness in seventh grade, improved wellness in eighth grade, and a reduction in wellness in ninth grade may be explained by social and emotional adjustments need for these critical transition years. The participants in this sample entered middle school in seventh grade and high school in ninth grade. Research has shown that these critical transitions may negatively affect the overall well-being of students.

One-way analysis of variance (ANOVA) was also used to evaluate the mean difference significance between participants in grades seven, eight, and nine and their academic and behavioral data. Table 18 illustrates the mean (M) value for grade seven, eight, and nine students on the academic and behavioral engagement measures by subgroup.

Table 18

Analysis of Variance, Behavioral Engagement Measures (M) Value for Subgroups: Grade Seven, Eight, and Nine

Dependent Variables	Grade 7 <i>N</i> = 131	Grade 8 <i>N</i> = 159	Grade 9 <i>N</i> = 273
Grade Point Average	3.22*	3.37*	3.03*
CST – Mathematics	354.88*	339.69*	326.74*
CST – English-Language Arts	365.50	379.45	371.07
Number of Courses Failed	.53	.37	.62
Number of Discipline Referrals	.94*	1.11*	.53*
Total Days Absent	6.14*	7.85*	6.64*

* Significantly different mean amongst subgroups, $p < .05$

The homogeneity of variance, as measured by the significance of Levene's test ($p < .05$) ranged from .00 (GPA and CST-ELA) to .08 (CST-Math). GPA, CST-ELA, number of course failed, number of discipline referrals, and total days absent all violated the homogeneity of variance assumption. As the assumption of equal variance was violated for these variables, the researcher used Welch's and Brown-Forsythe's robust tests of equality of means as an alternative test of variance. Post-hoc comparisons using the Turkey HSD test indicted that the means were significantly different in GPA, CST-Math, number of courses failed, and number of discipline referrals between all grade levels.

Overall results indicate that ninth grade student had significantly lower mean scores in the area of GPA ($M = 3.03$, $F(273) = 12.55$, $p < .05$) and CST-Math ($M = 326.74$, $F(273) = 10.42$, $p < .05$). Eighth grade students were more likely to have more discipline referrals ($M = 1.11$, $F(159) = 9.01$, $p < .05$) and miss more days of school ($M = 7.85$, $F(159) = 4.21$, $p < .05$). Ninth grade seems to be a difficult transition year for students. Not only did they score the lowest in overall wellness, but they also had the lowest GPA of these subgroups. These results may suggest that ninth grade students have less of a connection with the school.

Further analysis included standard multiple regression to assess the predictability of the ten domains of wellness on academic achievement and behavioral engagement as measured by subgroup identification. Significant relationships were found between students in the area of academic and behavior variables and a model that included all ten domains of wellness for eighth and ninth grade students. The strongest correlation with ninth graders was the relationship between wellness and CST-ELA. Wellness explained 17% of the variance in CST-ELA for ninth grade students ($F(10,262) = 5.12$, $R = .41$, $R^2 = .17$, Adjusted $R^2 = .14$, $p < .05$). The highest correlation of wellness and the dependent variables was found in number of discipline referrals for eighth grade students. Wellness explained 22% of the variance in discipline referrals for eighth grade students ($F(10,148) = 4.18$, $R = .47$, $R^2 = .22$, Adjusted $R^2 = .17$, $p < .05$). The data also suggests that wellness only was a significant contributor to GPA ($F(10,120) = 3.57$, $R = .48$, $R^2 = .23$, Adjusted $R^2 = .17$, $p < .05$) and CST-Math

($F(10,120) = 1.92$, $R = .37$, $R^2 = .14$, Adjusted $R^2 = .07$, $p < .05$) for grade seven students.

Summary

Multiple regression data analysis was used to examine the ten domains of wellness measured and their relationship to identified risk variables in the areas of academic achievement and behavioral engagement. Academic achievement variables included grade point average, CST scores in the areas of mathematics and English-Language arts, and the number of courses failed. Behavioral engagement measures included the total number of discipline referrals and total days absent. Multiple regressions revealed that Hypotheses one and two were supported and Hypothesis Three was supported with few exceptions. Overall, the ten domains of wellness did significantly predict academic achievement and behavioral engagement for the entire sample population as well as most of the identified subgroups.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Overview

This study examined the relationship between multiple domains of wellness, academic achievement, and behavioral engagement which also included a subgroup perspective. Wellness is a positive psychology construct that can be defined as the “attitudes and activities which improve the quality of life and expand potential for higher levels of functioning” (Mullen, 1986, p. 34). This study served to fill a gap in the research on student wellness and its relationship to objective dependent variables in the seventh, eighth and ninth grade years. In addition, previous research has shown that student individual characteristics (male, Hispanic, English Learner (EL), socioeconomic disadvantaged (SED)) can predict dropping out of school (Rumberger & Arellano, 2007). This study is one of the few to look at the multiple wellness domains through the lens of subgroup populations. In this study, the researcher attempted to identify patterns of wellness that may lead to increased achievement and behavioral engagement. The purpose of this study was to explore the synergistic nature of the school and individual factors that may lead to student disengagement. Academic achievement and student behavior have been shown to be risk factors for dropping out of school (Rumberger & Lim, 2008). Furthermore, the study examined the mean differences in subgroup

populations in the areas of wellness and compared wellness' predictive value on academic achievement and student behaviors. In this sense, wellness can be thought of as a formative measure that provides educational leaders with specific knowledge on early interventions that may prevent disengagement and increase achievement. This study focused on the notion that it is the school's responsibility, in consultation with the home and community, to recognize and develop these positive internal strengths.

The Child and Adolescent Wellness Scale (CAWS) was given to 563 students in grades seven through nine in a southern California school district. The CAWS reported data in ten domains of wellness, which included adaptability, connectedness, conscientiousness, emotional self-regulation, empathy, initiative, mindfulness, optimism, self-efficacy, and social competence. Correlations between the results of the CAWS, academic achievement, and student behavior were analyzed. This study supported the hypotheses that the CAWS model of wellness was related to these student outcomes. Standard multiple regression and independent sample t-tests showed that the relationship between wellness, academic achievement, and behavioral engagement varied amongst some subgroups.

Description of Sample

Participants in this study were students from a southern California public school district in a city of approximately 40,000 residents. The researcher

surveyed and collected data for 563 students in grades seven ($N = 131$), eight ($N = 159$), and nine ($N = 273$). Subgroup information was collected in the area of gender, EL, SED, and ethnicity. In regards to ethnic distribution, only two subgroups emerged with significant numbers. These ethnic subgroups included Hispanic (35.7%, $N = 201$) and white (58.8%, $N = 331$) students. The number of female participants was 312 (55.4%) and 251 were male students (44.6%).

Description of Independent Variables

Independent variables for this study included the ten domains of wellness as measured by the CAWS. Students were administered the CAWS in which they answered 100 Likert-scale questions. Based on student responses, each question was given a value of 1 through 4. Each domain of wellness included ten questions. Total wellness ranged from 3.2 to 3.8 with a mean of 3.18 ($SD = .27$). The lowest wellness scores were in the areas of emotional self-regulation ($M = 2.85$, $SD = .38$), adaptability ($M = 3.10$, $SD = .34$), and initiative ($M = 3.10$, $SD = .37$). The largest mean scores for wellness were found in self-efficacy ($M = 3.33$, $SD = .36$) and social competence ($M = 3.31$, $SD = .34$).

Description of Dependent Variables

The variable of grade point average (GPA) was considered dependent for this study. GPA used for this study was a one-year GPA in which the total number of grade points received was divided by the total number grade points

attempted. Unique to this school district was the fact that they did not offer a grade of D. Grades points were calculated as a grade of A = 4, B = 3, C = 2, and F = 0. The final 563 participants in this study had an overall grade point average of 3.17 ($SD = .71$) for the 2010-2011 school year.

The second and third dependent variables used for this study were based on the California Standards Test (CST). The CST is given to students once a year after which 85% of the school year has concluded. The score range is between 150 (Far Below Basic) to 600 (Advanced). This standardized state paper and pencil assessment has been given for over ten years in the areas of English-Language Arts (ELA) and mathematics (Math). It is these scores that define school rankings statewide and fulfill the obligations of NCLB. The results also produce sanctions for schools and districts who fail to maintain satisfactory annual progress. The participants in this study had an overall mean score for CST-ELA of 372.14 ($SD = 55.09$) and 336.94 ($SD = .60$) for CST-Math.

Number of courses failed was the final academic achievement variable in the study. All participants in the study were enrolled in 12 classes during the 2010-2011 school year. They were on a six period day and therefore took six classes per semester. Students in this sample failed from 0 to 6 courses during the school year. The mean for courses failed was .53 ($SD = 1.08$).

Two variables that measured behavioral engagement were total number of discipline referrals and total days absent. Total discipline referral information was gathered from the school database. Data was coded if the student had an entry

in the 2010-2011 school year for any behavioral disruption. The disruption could have been in the classroom or out on campus during lunch or other activities. The number of discipline entries for participants in this study ranged from 0 to 10. The mean for this variable was .79 ($SD = 1.46$). The second behavioral engagement was total days absent. Students were enrolled for 175 days during the 2010-2011 school year. The total days absent ranged from 0 to 27.50 days with an average days missed of 6.87 ($SD = 5.31$).

Analysis of Research Hypotheses

Hypotheses One and Two

Hypothesis one suggested that there was a relationship between the ten domains of wellness and academic achievement. A correlation matrix was used to test the relationship between wellness and academic variables. A significant relationship was found between all dependent variables (GPA, CST-ELA, CST-Math, number of courses failed, and total days absent) and the model of wellness that contained all ten domains. The percent of variances in academic achievement that was explained by the CAWS ranged between 12% for GPA and 6% for the number of courses failed. The relationship between courses failed and wellness predicted that as wellness increases, the number of courses failed decreases. In addition, the CAWS explained 9% of the variance in CST-Math scores and 11% of the variance in CST-ELA scores.

Hypothesis two suggested that there existed a significant relationship between behavioral engagement and the ten domains of wellness. Regression analysis revealed that all behavioral engagement dependent variables were significantly predicted by the complete CAWS model including all ten wellness domains. 7% of the variance in total days absent was explained by the CAWS. The CAWS also explained 7% of the variance in the number of behavioral office referrals. Both models were significant and had an effect size of .26 and .25 indicating a small correlation. Though the entire model of wellness was significantly related to total days of attendance, the only independent domain of wellness that was significantly related to total days absent was adaptability. The results indicate that as adaptability increased, absences decreased. The single domain of wellness that was related to discipline referrals was emotional self-regulation. When emotional self-regulation increased, discipline referrals tended to decrease.

Implications: Hypotheses One and Two

The results of hypothesis one and hypothesis two suggest that the wellness model should be used to guide, inform, and transform school practices in ways that align to the cognitive, social, and emotional domains of wellness. As it stands, current school practice tends to focus on the academic performance of the child to the exclusion of those areas of development within the wellness construct. While the positive psychology movement has been around for decades, the question remains, "Why are schools not considering the importance

of wellness in supporting students' overall development?" These results demonstrate that by focusing on wellness in a preventative nature, achievement will also improve. With regard to how wellness can be used to inform practice, these results suggest that very specific programs must target each domain of the wellness construct. This can be accomplished through identifying those beliefs, those emotions, and those social areas among each student in the school system and creating specific interventions related to the areas of wellness that are lacking. Researchers have suggested utilizing a cognitive behavioral therapy approach where students are taught about their beliefs and are given strategies for modifying those beliefs in those areas known to relate to positive development (Nelson, Schnorr, Powell, & Huebner, In Press). Additionally, school programs can focus specifically on those beliefs that impact student's ability to regulate their own emotions. Emotional self-regulation is an absolute essential quality found throughout the literature. Findings indicate that emotional self-regulation is correlated to resiliency (Copeland, et al., 2010; Greenberg, Weissberg, O'Brien, Zins, Fredericks, Resnik, & Elias, 2003). Nelson et. Al (in press) through a comprehensive review of the literature on building resilience in schools, have found that whole school programs with a long term plan are more successful at building wellness than fragmented, one-shot, and short term approaches. The following programs have been found to have positive results on characteristics related to wellness. The Promoting Alternative Thinking Strategies (PATHS) program is based on social and emotional learning and is focused on

helping students develop skills they need in life to be successful. Results have shown that students who participate in this program were less disruptive, less hyper-active, followed classroom rules, expressed emotions appropriately and were on task more (Catalano, et al., 2004). Another program is Skills, Opportunities, and Recognition (SOAR). Results from the SOAR program indicate that students who participated in the program had increased reading and math scores along with less at-risk behaviors.

Hypothesis Three

Hypothesis three suggested there was a multivariate relationship between the ten domains of wellness, academic achievement, and behavioral engagement and the relationships were different amongst some student subgroups. Hypothesis three was supported by the data. Data supporting the relationship of the CAWS, behavioral engagement, and academic achievement was further reduced to looking at subgroups within the sample population.

The first subgroups that were compared were male and female students. Female students' were found to have significantly higher levels of empathy and social competence. There were also significant differences in male and female students in the area of behavioral engagement. Male students were more likely to have a lower GPA, lower CST-ELA scores, fail almost twice as many courses, and were more likely to receive discipline referrals.

The next subgroup that was explored was ethnic based. The sample population in this study consisted of only two significant ethnic subgroups,

Hispanic and white. Overall white students had a higher mean score on total wellness when compared with Hispanic students. Although white students tended to score higher on the wellness model, no significant differences were identified in any area of wellness between white and Hispanic students. Furthermore, this lack of significant difference was oppositional to the findings in academic achievement. The data suggested that Hispanic students scored lower on all academic measures and the mean score for white students' GPA was higher than the mean GPA for Hispanic students. In addition, white students scored higher on the CST-Math and CST-ELA than Hispanic students. Hispanic students were more likely to fail classes than their white colleagues. Dependent academic and behavior variables were correlated with wellness for white students. Similar findings indicated that academic variables for Hispanic students were related to their score on CAWS. Interestingly, behavioral engagement was not related to Hispanic student wellness.

Further exploratory analysis was conducted with EL and Hispanic students to investigate the relationship between Hispanic EL students and Hispanic non-EL students. There were 91 EL students in this sample. Eighty nine percent ($N = 81$) of the EL students also fell into the Hispanic subgroup. A comparison of Hispanic EL and Hispanic non-EL scores on wellness suggested that there was not an overall significant difference in mean scores for the ten domains of wellness. The mean difference in empathy was the only significant difference in the wellness domain and Hispanic EL students scored lower on this scale than

Hispanic non-EL students. In a comparison of means in the areas of academic achievement and behavioral engagement, significant differences were found in GPA, CST-ELA, and number of courses failed. Hispanic EL students were more likely to have a lower GPA, a lower CST-ELA score, and fail twice as many classes when compared with Hispanic non-EL students.

Analysis of SED students explored SED students in terms of ethnicity. White SED students scored significantly lower in all areas of wellness, except adaptability and empathy, when compared with Hispanic SED students. Total wellness was lowest for SED white students followed by SED Hispanic students, Hispanic non-SED students, and finally white non-SED students. A comparison of dependent variables identified a significant relationship between academic achievement and behavioral engagement for all SED students. White SED students had the lowest GPA, lowest CST-Math scores, had the most discipline referrals, and missed the most days of school when compared with their Hispanic SED colleagues. In addition, a significant correlation was found between the domains of wellness and academic achievement outcomes for white and Hispanic SED students. Wellness explained 25% of the variance in GPA for white SED students and 18% of the variance in GPA for Hispanic SED students.

The final category used in the analysis of wellness, academic achievement, and behavioral engagement was grade level data. Grade level data suggested that students scored the lowest on the CAWS during their ninth grade year. Of the eight domains of wellness that were found to have significantly

different means for grade level students, ninth grade students scored the lowest on all eight. Data suggests that wellness increases from seventh to eighth grade and then decreases in ninth grade. Overall wellness was highest for eighth grade students followed by seventh and then by ninth grade. Significant differences were also found in GPA. Ninth grade students had the lowest GPA and eighth graders had the highest GPA. Ninth grade students were also more likely to have lower scores on CST-Math.

Implications: Hypothesis Three

Male and Female Subgroups. Male and female students differed in two domains of wellness. Since empathy and social competence were significantly different for females and males of the sample in this study it would be important for programs of practice to be designed to improve empathy and social competence for male students. Interventions that target domains of wellness through the development of students' relationships with their teachers, peers, mentors, and/or advisors may increase a student's engagement and motivation in school (Martin & Dowson, 2009). Within these interpersonal relationships is the actual self-system process referred to as relatedness. "This intrapersonal energy (relatedness), gained from interpersonal relationships, provides a primary pathway toward motivation engagement in life activities" (Martin & Dowson, 2009, p. 330). If a student has positive relatedness they are more likely to take on challenges, create goals, and have high expectations that push and motivate them. The concept of relatedness is crucial in the development of student

engagement. Mentoring programs are a method in which schools have initiated activities to build interpersonal relationships on campuses. A mentor usually comes in the form of an older student meeting with a younger student in order to develop their academic and/or social success in school. These dynamics create relatedness among students. The relationships that were formed between the mentor and the younger students have been shown to enhance student engagement and academic achievement (Martin & Dowson, 2009, p. 343). The mentors in these programs model proper behavior and communication, so the relatedness in these types of programs is essential for their success.

Advisor and advisee (A/A) initiatives have been developed to guide students through their school years using social, emotional, and academic strategies of success. For many schools throughout the United States, these types of programs influence student education. Nelson, Campbell, Nelson, and Schnorr (2009) found that students who thought more positively about the A/A program also reported being more bonded with their advisor. The students also had a more positive outlook on the "social benefits, academic progress, and parental involvement attributed to A/A participation" (Nelson, et al., 2009, p. 53). The study found that the perceptions of these students towards the A/A relationship were a better predictor of students' perceptions of academic achievement than social benefits and parental contribution. This study highlights the importance of middle and high school students developing a relationship with one member of the school community. "Strong relationships and connections are

critical factors in both student persistence and student achievement" (Yazzie-Mintz, 2009, p. 8). Martin and Dowson (2009) found that "learning environments that focus on caring student-teacher relationships...result in students who perform better academically; are more likely to attend school; and have significantly lower rates of emotional distress, violence, delinquency, substance abuse, and sexual activity" (p. 340).

Socioeconomically Disadvantaged, English Learner Status, and Ethnicity Subgroups. The data for this study was further analyzed with regard to ethnic groups, EL and SED students. White and Hispanic SED students were compared to white non-SED and Hispanic non-SED schoolmates. Findings indicated that significant differences existed between SED and non-SED students within ethnic subgroups on the measures of wellness as well as academic achievement and behavioral engagement. White SED students failed three times as many courses as white non-SED students. Hispanic SED students failed nearly twice as many courses as Hispanic non-SED students. Kurlaender, Reardon, and Jackson (2008) found high school achievement and graduation was strongly correlated to achievement in high school including grade retention, course failings, grades and test scores. Both SED subgroups reported high rates of absenteeism when compared with their non-SED counterparts. Finn (1993) found that there was a strong relationship between attendance and academic achievement. The fewer number of absences tended to predict higher standardized test scores. There were no significant differences found between Hispanic SED students and white

SED students suggesting that SED is an important factor to consider with regard to the need for schools to build wellness amongst SED students.

Along with the implications of the SED achievement gaps, ethnicity based achievement gaps were also found in this study. One of the findings suggests that the majority of SED students in this study were Hispanic. The phenomenon for performing poorly academically and behaviorally may be explained through the concept of cultural capital. Lareau and Weininger (2003) define cultural capital as “the direct or indirect imposition of evaluative norms favoring the children or families of a particular social milieu” (p. 598). The theory of cultural capital suggests that students who are exposed to important cultural and social capital outside of school are better prepared to handle the academic and social rigors of school. The concept of cultural capital in schools would suggest that the school culture is based on the patterns of the dominant ideology in the broader culture. SED students may not fit within the broader cultural expectations and therefore have difficulty in school. Cultural capital has been found to be associated with cultural participation and intellectual resources which may limit SED students academic achievement (Sullivan, 2001). Parent social class has also been significantly related to standardized test scores (Sullivan, 2001). The results of this study suggest that using a model of cultural capital in order to improve wellness and transform schools could be applied to SED students across ethnic groups.

Schools can shape interventions that are specific to the wellness of SED students. In this study the majority of SED students were Hispanic. As schools attempt to build cultural capital for SED students, this will include a large percent of Hispanic students and therefore will benefit all ethnic subgroups. To increase student achievement and reduce dropout rates, schools need to develop interventions that may affect the socioeconomic status of students and break the cycle of poverty in their family. As schools look to target specific student populations with limited resources, this study has shown that a concentration on wellness with SED students could generate increased results in academic and behavioral outcomes.

Grade Level Subgroups. Findings in this study indicated that wellness follows a developmental path by grade level. Students in this sample tended to have decreased levels of wellness in seventh grade. Wellness increased with eighth grade students and then fell below seventh grade level in ninth grade. This pattern may be due to the transition that many students have difficulty with from elementary to middle school and then from middle school to high school. Also suggested in the research is that ninth grade students not only have difficulty in the area of wellness but in academic achievement when compared to grade eight and nine students. Roeser, Galloway, Casey-Cannon, Watson, Keller, and Tan (2008) stated that the adolescent years have been shown to be pivotal in school achievement and well-being. Research has shown that during these critical

middle years, student engagement in school may decline while emotional distress may increase.

The promotion of positive youth development has been shown to decrease adolescent deficiencies and increase achievement. Schools can be instrumental in leading the positive youth development charge. In most states, students spend six to eight hours in school five days a week. Youth development occurs on a daily basis in schools. Whether students are facing social, emotional, vocational, or academic developmental issues, schools have the time necessary to effect positive change. Studies have shown that these experiences correlate to increased student resilience and positive overall development (Gomez & Ang, 2007). Skeptics of positive youth development are concerned that by focusing on such topics time will be taken away from the demands of content standards and high academic expectations (Gomez & Ang, 2007). The proponents of this movement would argue that by focusing on the school culture being positive and engaging for all students, academic standards will be met. Schools focusing on the development of a positive school culture and engaging all students in positive youth development can reduce at-risk behavior and failure rates (Gomez & Ang, 2007).

Pittman (2011) suggests that schools know and are interested in promoting youth development but school policies and practices do not align to those beliefs. The result of this study reinforces the suggestion that increased levels of emphasis in wellness would produce desired academic and behavioral

results. The research suggests that students need stability and continuity for development to occur. The relationship that students build takes time. A student going into ninth grade experiences significant changes the first day of school that may include academic as well as behavioral expectations. High schools would benefit from a freshman success program that focused on incoming ninth graders and helps them build connections with the school. A suggestion would be for eighth graders to take the CAWS as a universally screening scale so that high school administration and counselors would be informed about the next year's incoming students. Based on the CAWS and other measures, school counselors could identify eighth graders in order to create support groups and/or support class periods during the school day.

Limitations

This research is an examination of the ten domains of wellness and their relationship to at-risk students behaviors that may lead to dropping out of school. Findings from this study must be framed within the limitations of the research design and execution of the study. First, the researcher used a convenience sample which may restrict the generalizability of the results to the general population. Students in this study were selected and recruited from a single high school and a single middle school within the same school district. Though these students represent a diverse student population, they may not match similar populations in surrounding school districts. Also, students have many choices for schooling including charter schools, private schools, or online learning institutions

which typically enroll students with different backgrounds and experiences. Second, these were students who were currently enrolled in grades seven through nine and who agreed to participate in the study. Additional research on those students who had left school, or access to those students that did not participate in this research as well as those students who were excluded from the study as outliers might present different findings or might contribute more information useful to the study. In addition, the Child and Adolescent Wellness Scale used in this study is a self-reporting instrument that assumes students are participating fully by providing correct information. Though there are some limitations to this study, the information provided may help school officials identify students at-risk of dropping out before it is too late. It may provide a framework for positive interventions prior to students engaging in those at-risk behaviors. In addition, the CAWS is written only in English and so this could be problematic. The study design limited the researcher from being able to determine the synergistic nature of wellness, achievement, and behavior because the design was not longitudinal. Another limitation was the nature of the CAWS in that it was only written in English and EL students may have had difficulty with comprehension. The identification of SED students is also a limitation of this research. The subgroup was identified by a student receiving free or reduced lunch. This is a parent option and there may be parents who do not chose to enroll their student in the program though they may truly be economically disadvantaged.

Directions for Future Research

This research was exploratory in nature and teased out the importance of wellness on student academic achievement and behavioral engagement. One of the limitations of the study was that directionality was not able to be established. Future longitudinal research would be valuable to add to the literature on wellness and its contribution to academic achievement and behavioral engagement. A study that followed students from sixth through ninth grade and reported on annual CAWS scale scores as well as behavioral and academic information would be valuable. In the area of male and female wellness, academic achievement, and behavioral engagement, it would be beneficial to further examine empathy and social competence to determine how these domains of wellness might contribute to achievement for all students.

The research on ethnicity and wellness indicated there were not significant differences in wellness between Hispanic and white students. This may indicate that wellness is a universal theme as it was related to the entire sample in the areas of academic achievement and behavioral engagement. The results of this study did show that Hispanic and white academic achievement was significantly different though wellness was not. Future research could focus on wellness through a cultural perspective. A mixed methods study in which the researcher spoke with those students in the Hispanic subgroup who were academically successful may shed light on the significant differences.

Conclusion

The overall results of this study suggest that SED, EL and Hispanic subgroups could benefit the most from both academic programs that were engaging and contextualized. Models of practice such as participatory action research where students are encouraged to engage in action research at their school can make a difference in engaging all students (Rodriguez, 2008) while also promoting wellness. Further, such a model encourages student voices and provides opportunities for students to feel important and connected to their school.

Further, this study suggests that such wellness constructs such as connectedness and social competence are critical toward promoting strong teacher-student relationships, thereby increasing achievement and decreasing the likelihood of dropping out. Programs of practice that focus on working with teachers through professional development on their own personal areas of wellness might prove beneficial in their ability to relate to and connect with their students.

Finally, it is evident that SED subgroups struggle in all areas of noted factors that pertain to achievement. Battle & Pastrana (2007) argue this point following their longitudinal research with high school students:

As socioeconomic status increased, test scores also increased. Education policy makers should take this into account when introducing and implementing initiatives designed to increase the academic achievement

level of Hispanics. Our findings support the argument that socioeconomic status—and increasingly, not race—is a key determinant of educational achievement. When controlling for variables that account for demographic characteristics, home environment, and economic capital, socioeconomic status continued to be a significant and powerful determinant of academic achievement. In fact, in our analyses, socioeconomic status, as a determinant, was at least 10 times more powerful than race (p. 45).

While this is not necessarily a new idea, this study reveals that wellness is a useful way of addressing the achievement gap among SED and non-SED students particularly since they were significantly different in their wellness scores. The wellness construct focuses on strengths and when schools work collaboratively with homes and communities using this key idea as the impetus for change, powerful transformations will occur. Pittman (2011) wrote, “Most people understand the value of strengthening youngsters, families, schools, and neighborhoods. Now is the time to move forward together to make it happen equitably” (p. 13).

APPENDIX A
STUDENT PARTICIPANT ASSENT FORM

Student Participant Assent Form

As study participants will be in an age range of 12 to 16 years, this procedure is to be read aloud as a "script."

Hello, my name is Eric Vreeman and I am doing a project to learn about how student engagement and wellness relates to how well students do in their school work. I am inviting you to join my project. I picked you for this project because you are in the 7th, 8th, or 9th grade this year. I am going to read this form to you. You can ask any questions you have before you decide if you want to do this project.

WHO I AM: I am a student at California State University, San Bernardino. I am working on my doctoral degree. I am also currently the principal at XXXX Elementary School.

ABOUT THE PROJECT:

If you agree to join this project, you will be asked to:

1. Complete two surveys: one on student engagement and the other on wellness.
2. Choose answers that describe you the best.
3. Mark your answer choices on a bubble sheet that I give you.
4. When we are through, place your bubble sheet in a box that I will have at the front of the room.

IT'S YOUR CHOICE: You don't have to join this project if you don't want to. You won't get into trouble with your family, your teachers, the principal, or anyone else if you say no. If you decide now that you want to join the project, you can still change your mind later just by telling me. If you want to skip some parts of the project, just let me know. It's possible that being in this project might cause you to think about some things you would like to be different for you. If there is anything from the surveys that you feel you need to talk about further, you will have access to your school counselor. But this project might help others by showing us how to help children have good lives in areas that help their school work, such as friendships, health, and community.

PRIVACY: Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. The only time I would have to discuss this with someone is if I learn about something that could hurt you or someone else.

ASKING QUESTIONS: You may ask me any questions you want now regarding this survey. If you think of a question later, you or your parents can reach me at vreemane@coyote.csusb.edu or my advisor, Dr. Donna Schnorr at dschnorr@csusb.edu

APPENDIX B
CAREGIVER CONSENT FORM – MIDDLE SCHOOL

Caregiver Consent Form –Middle School

Dear Parent/Guardian:

Your child, who is in the seventh or eighth grade at XXXX Middle School is invited to participate in a research study on different areas of student engagement and wellness as related to academic achievement at school. Please read this form and ask any questions you may have before you agree to allow your child to participate in the study.

The study is being conducted by Eric Vreeman (researcher), a doctoral candidate with California State University, San Bernardino. Mr. Vreeman has worked in the XXXX for several years as a school administrator. He is currently the principal at XXXX Elementary School.

Background Information: This study is designed to examine the relationship between wellness factors and academic achievement of seventh, eighth and ninth grade students (as representative of transitional age children).

Procedures: If your child participates in this study, he/she will complete a wellness and engagement survey at school which includes 100 statements about different areas of wellness and 100 statements about engagement in school. He/she will indicate how much that statement is like him/her. These surveys will take 50 minutes each to complete. The researcher will obtain electronic data including a) a copy of your child's scores on the CST that he/she took in May 2010, (b) attendance records from the 2010-2011 school year, (c) current grade point average, d) Benchmark Assessment scores, e) demographic data and compare them with the results of the wellness and engagement surveys.

Confidentiality: All records of this study will be kept private, in a locked file cabinet. As students complete the wellness inventory, it will be placed in a locked portable container, which will be opened by the researcher only. This container will be transported by the researcher directly from the classroom to the locked file cabinet following the daily collection of the surveys. A code will be used to match the information from the inventory to your child's achievement scores and no information will be included in reports of study findings that would make it possible to identify participants. The researcher will be the only person to have access to the records of the study. All student academic and demographic data will be collected electronically. Student survey data will be collected on paper and destroyed (shredded) on or before January 1, 2012 once student personal information is coded to ensure confidentiality. The non-identifiable data set will be destroyed (shredded) on or before January 1, 2015.

Voluntary Nature of the Study: Your child's participation in this study is voluntary and you and/or your child are free to withdraw at any time during the process of completing the surveys. Your decision for your child to participate in this study will not affect your relationship with the XXXX Unified School District or XXXX Middle School in any way –

and if you decide to withdraw your child from participation, you may do so without affecting your relationship with this school or school district.

Risks and Benefits of being in the Study: There are no physical risks to participating in this study. It is possible that participants could consider some of the information personal in nature. Participants are not obligated to complete any parts of the inventory with which they feel uncomfortable. Students will be told that if there is anything from the surveys that they feel they need to talk about further, they have access to their school counselor. This study may also help schools work with families and their children to help students achieve success in all of the areas of their lives.

Benefits: This study will identify relationships between academic success, student engagement, attendance, and wellness. After identifying these positive psychology factors, the researcher intends to share the results with the schools and district office. Recommendations will be made so that they may work to develop appropriate programs that will help increase student success.

Contacts and Questions: The researcher conducting this study is Eric Vreeman. He can be reached by email at vreemane@coyote.csusb.edu. His advisor is Dr. Donna Schnorr, who can be reached by email at dschnorr@csusb.edu. You can be provided a copy of this form to keep for your records, if you so request.

Statement of Consent: I have read the above information. I have asked any necessary questions, to which I received answers. By signing this form, I consent for my child to participate in this study.

Printed Name of Parent/Guardian:

Signature of Parent/Guardian:

Printed Name of Student:

Date:

APPENDIX C
CAREGIVER CONSENT FORM – HIGH SCHOOL

Caregiver Consent Form – High School

Dear Parent/Guardian:

Your child, who is in the ninth grade at XXXX High School, is invited to participate in a research study on different areas of student engagement and wellness as related to academic achievement at school. Please read this form and ask any questions you may have before you agree to allow your child to participate in the study.

The study is being conducted by Eric Vreeman (researcher), a doctoral candidate with California State University, San Bernardino. Mr. Vreeman has worked in the XXXX Unified School District for several years as a school administrator. He is currently the principal at XXXX Elementary School.

Background Information: This study is designed to examine the relationship between wellness factors and academic achievement of seventh, eighth and ninth grade students (as representative of transitional age children).

Procedures: If your child participates in this study, he/she will complete a wellness and engagement survey at school which includes 100 statements about different areas of wellness and 100 statements about engagement in school. He/she will indicate how much that statement is like him/her. These surveys will take 50 minutes each to complete. The researcher will obtain electronic data including a) a copy of your child's scores on the CST that he/she took in May 2010, (b) attendance records from the 2010-2011 school year, (c) current grade point average, d) Benchmark Assessment scores, e) demographic data and compare them with the results of the wellness and engagement surveys.

Confidentiality: All records of this study will be kept private, in a locked file cabinet. As students complete the wellness inventory, it will be placed in a locked portable container, which will be opened by the researcher only. This container will be transported by the researcher directly from the classroom to the locked file cabinet following the daily collection of the surveys. A code will be used to match the information from the inventory to your child's achievement scores and no information will be included in reports of study findings that would make it possible to identify participants. The researcher will be the only person to have access to the records of the study. All student academic and demographic data will be collected electronically. Student survey data will be collected on paper and destroyed (shredded) on or before January 1, 2012 once student personal information is coded to ensure confidentiality. The non-identifiable data set will be destroyed (shredded) on or before January 1, 2015.

Voluntary Nature of the Study: Your child's participation in this study is voluntary and you and/or your child are free to withdraw at any time during the process of completing the surveys. Your decision for your child to participate in this study will not affect your relationship with the XXXX Unified School District or XXXX High School in any way –

and if you decide to withdraw your child from participation, you may do so without affecting your relationship with this school or school district.

Risks and Benefits of being in the Study: There are no physical risks to participating in this study. It is possible that participants could consider some of the information personal in nature. Participants are not obligated to complete any parts of the inventory with which they feel uncomfortable. Students will be told that if there is anything from the surveys that they feel they need to talk about further, they have access to their school counselor. This study may also help schools work with families and their children to help students achieve success in all of the areas of their lives.

Benefits: This study will identify relationships between academic success, student engagement, attendance, and wellness. After identifying these positive psychology factors, the researcher intends to share the results with the schools and district office. Recommendations will be made so that they may work to develop appropriate programs that will help increase student success.

Contacts and Questions: The researcher conducting this study is Eric Vreeman. He can be reached by email at vreemane@coyote.csusb.edu. His advisor is Dr. Donna Schnorr, who can be reached by email at dschnorr@csusb.edu. You can be provided a copy of this form to keep for your records, if you so request.

Statement of Consent: I have read the above information. I have asked any necessary questions, to which I received answers. By signing this form, I consent for my child to participate in this study.

Printed Name of Parent/Guardian:

Signature of Parent/Guardian:

Printed Name of Student:

Date:

APPENDIX D
INSTITUTIONAL REVIEW BOARD LETTER



Academic Affairs

Office of Academic Research • Institutional Review Board

June 27, 2011

Mr. Eric Vreeman
c/o: Prof. Donna Schorr
Department of Educational Psychology and Counseling
California State University
5500 University Parkway
San Bernardino, California 92407

CSUSB
INSTITUTIONAL
REVIEW BOARD
Full Board Review
IRB# 10079
Status
APPROVED

Dear Mr. Vreeman:

Your application to use human subjects, titled "Contributions of Wellness on Student Achievement, Engagement, and Attendance, and Attendance as Mediators of Students' Dropping Out of School" has been reviewed and approved by the Institutional Review Board (IRB). The attached informed consent document has been stamped and signed by the IRB chairperson. All subsequent copies used must be this officially approved version. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended. Your application is approved for one year from May 27, 2011 through May 26, 2012. One month prior to the approval end date you need to file for a renewal if you have not completed your research. See additional requirements (Items 1 - 4) of your approval below.

Your responsibilities as the researcher/investigator reporting to the IRB Committee include the following 4 requirements as mandated by the Code of Federal Regulations 45 CFR 46 listed below. Please note that the protocol change form and renewal form are located on the IRB website under the forms menu. Failure to notify the IRB of the above may result in disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years.

- 1) Submit a protocol change form if any changes (no matter how minor) are made in your research prospectus/protocol for review and approval of the IRB before implemented in your research.
2) If any unanticipated/adverse events are experienced by subjects during your research,
3) Tap renew your protocol one month prior to the protocols end date,
4) When your project has ended by emailing the IRB Coordinator/Compliance Analyst.

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, IRB Compliance Coordinator. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at mgillesp@csusb.edu. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely, Sharon Ward, Ph.D., Chair
Institutional Review Board

SW/mg

cc: Prof. Donna Schorr; Department of Educational Psychology and Counseling

909.537.7588 • fax: 909.537.7028 • http://irb.csusb.edu/
5500 UNIVERSITY PARKWAY, SAN BERNARDINO, CA 92407-2393

REFERENCES

- Adams, T., Bezner, J., & Steinhardt, M. (1997). The conceptualization and measurement of perceived wellness: Integrating balance across and within dimensions. *American Journal of Health Promotion, 11*, 208-218.
- Alexander, K. L., Entwisle, D. R., & Horsey, C. S. (1997). From first grade forward: Early foundations of high school dropout. *Sociology of Education, 70*(2), 87-107.
- Alva, S. A. (1991). Academic invulnerability among Mexican-American students: The importance of protective resources and appraisals. *Hispanic Journal of Behavioral Sciences, 13*(1), 18-34.
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools, 45*(5), 369-386.
- Archambault, I. A., Janosz, M. J., Morizot, J. M., & Pagani, L. P. (2009). Adolescent behavioral, affective, and cognitive engagement in school: Relationship to dropout. *Journal of School Health, 79*(9), 408-415.
- ASCD. (2009). *Making the case for educating the whole child*. Alexandria: Association for Supervision and Curriculum Development.
- Aud, S., Hussar, W., Planty, M., Snyder, T., Bianco, K., Fox, M., et al. (2010). *The condition of education*. Washington, D.C.: United States Department of Education.

- Bakracevic-Vukman, K., & Licardo, M. (2010). How cognitive, metacognitive, motivational and emotional self-regulation influence school performance in adolescence and early adulthood. *Educational Studies, 36*(3), 259-268.
- Balfanz, R., Herzog, L., & Iver, D. (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early identification and effective interventions. *Educational Psychologist, 42*(4), 223-235.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*(2), 117.
- Barrington, B. L., & Hendricks, B. (1989). Differentiating characteristics of high-school graduates, dropouts, and nongraduates. [Article]. *Journal of Educational Research, 82*(6), 309-319.
- Battle, J., & Pastrana, A. (2007). The relative importance of race and socioeconomic status among Hispanic and white students. *Hispanic Journal of Behavioral Sciences, 29*(1), 35-49.
- Belfield, C. R., & Levin, H. M. (2007). *The economic losses from high school dropouts in California*. Santa Barbara: University of California, Santa Barbara.
- Benson, P. L., Scales, P. C., Hamilton, S. F., Sesma, A., Hong, K. L., & Roehlkepartain, E. C. (2006). *Positive youth development so far: Core hypotheses and their implication for policy and practice*. Minneapolis: Search Institute.

- Bernard, B. (1993). Fostering resiliency in kids. *Educational Leadership*, 44-48.
- Borman, G. D., & Overman, L. T. (2004). Academic resilience in mathematics among poor and minority students. *Elementary School Journal*, 104(3), 177-195.
- Brown, T. M., & Rodriguez, L. F. (2009). School and the co-construction of dropout. *International Journal of Qualitative Studies in Education (QSE)*, 22(2), 221-242.
- Cairns, R. B., Cairns, B. D., & Neckerman, H. J. (1989). Early school dropout: Configurations and determinants. *Child Development*, 60(6), 1437-1452.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs. *Annals of the American Academy of Political and Social Science*, 591, 98-124.
- Catalano., Hawkins, J. D., Berglund, M. L., Pollard, J. A., & Arthur, M. W. (2002). Prevention science and positive youth development: Competitive or cooperative frameworks? *Journal of Adolescent Health*, 31, 230-239.
- Chafouleas, S. M., & Bray, M. A. (2004). Introducing positive psychology: Finding a place within school psychology. *Psychology in the Schools*, 4(1), 1-5.
- Christenson, S. L., & Thurlow, M. L. (2004). School dropout: Prevention considerations, interventions, and challenges. *Current Directions in Psychological Science*, 13(1), 36-39.

- Christle, C. A., Jolivette, K., & Nelson, C. M. (2007). School characteristics related to high school dropout rates. *Remedial and Special Education, 28*(6), 325-339.
- Ciarrochi, J., Heaven, P. C. L., & Davies, F. (2007). The impact of hope, self-esteem, and attributional style on adolescent school grades and emotional well-being: A longitudinal study. *Journal of Research in Personality, 41*, 1161-1178.
- Connell, J. P., Spencer, M. B., & Aber, J. L. (1994). Educational risk and resilience in African-American youth: Context, self, action, and outcomes in school. *Child Development, 65*(2), 493-506.
- Copeland, E. P., Nelson, R. B., & Traugher, M. C. (2010). Wellness dimensions relate to happiness in children and adolescents. *Advances in School Mental Health Promotion, 3*(4), 25-37.
- Cummins Lemon, J. (2010). *An investigation of the relationship among wellness, perceived stress, mattering, and at-risk status for dropping out of high school*. Mississippi State.
- Damon, W. (2004). What Is Positive Youth Development? *Annals of the American Academy of Political and Social Science, 591*, 13-24.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist, 61*(4), 305-314.

- Diseth, A. (2011). Self-efficacy, goal orientations and learning strategies as mediators between preceding and subsequent academic achievement. *Learning and Individual Differences, 21*(2), 191-195.
- Edmonds, R. (1982). Programs of school improvement: An overview. *Educational Leadership, 40*, 4-11.
- Eilam, B., Zeidner, M., & Aharon, I. (2009). Student conscientiousness, self-regulated learning, and science achievement: An explorative field study. *Psychology in the Schools, 46*(5), 420-432.
- Eisenberg, N., Spinrad, T. L., & Morris, A. S. (2002). Regulation, resiliency, and quality of social functioning. *Self and Identity, 1*(2), 121-128.
- El-Anzi, F. O. (2005). Academic achievement and its relationship with anxiety, self-esteem, optimism, and pessimism in Kuwaiti students. *Social Behavior & Personality: An International Journal, 33*(1), 95-103.
- Finn. (1993). *School engagement and students at risk*: National Center for Education Statistics, Washington D. C.
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research, 59*(2), 117-142.
- Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. [Article]. *Journal of Applied Psychology, 82*(2), 221-234.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109.

- Garaigordobi, M. (2009). A comparative analysis of empathy in childhood and adolescence: Gender differences and associated socio-emotional variables. *International Journal of Psychology and Psychological Therapy*, 9(2), 217-235.
- Gentry, M. (2006). No Child Left Behind: Neglecting excellence *Roeper Review*, 29(1), 24-27.
- Gillham, J., & Reivich, K. (2004). Cultivating optimism in childhood and adolescence. *Annals of the American Academy of Political and Social Science*, 591, 146-163.
- Gomez, B. J., & Ang, P. (2007). Promoting positive youth development in schools. *Theory Into Practice*, 46(2), 97-104.
- Gonzalez, R., & Padilla, A. M. (1997). The academic resilience of Mexican American high school students. *Hispanic Journal of Behavioral Sciences*, 19(3), 301-317.
- Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: Development and validation of the Child and Adolescent Mindfulness Measure (CAMM). *Psychological Assessment*, 23(3), 606-614.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., et al. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58(6-7), 466-474.

- Griffin, M. D., & Huebner, E. S. (2000). Multidimensional life satisfaction reports of middle school students with serious emotional disturbance. *Journal of Psychoeducational Assessment, 18*(2), 111-124.
- Hektner, J. M. (2001). Family, school, and community predictors of adolescent growth-conducive experiences: Global and specific approaches. *Applied Developmental Science, 5*(3), 172-183.
- Hollingsworth, M. A. (2009). *State of wellness and academic achievement of elementary students*. Walden University.
- Howard, S., Dryden, J., & Johnson, B. (1999). Childhood resilience: Review and critique of literature. *Oxford Review of Education, 25*(3), 307-323.
- Hoy, W. K., Tarter, C. J., & Hoy, A. W. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal, 43*(3), 425-446.
- Jimerson, S., Egeland, B., Sroufe, L. A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology, 38*(6), 525-549.
- Khoshouei, M. S. (2009). Psychometric evaluation of the Connor-Davidson Resilience Scale (CD-RISC) using Iranian students. *International Journal of Testing, 9*(1), 60-66.
- Kurlaender, M., Reardon, S. F., & Jackson, J. (2008). *Middle school predictors of high school achievement in three California school districts*. Santa Barbara: University of California, Santa Barbara.

- Lareau, A., & Weininger, E. B. (2003). Cultural capital in educational research: A critical assessment. [Article]. *Theory and Society*, 32(5-6), 567-606.
- Larson, R. W. (2000). Toward a psychology of positive youth development. *American Psychologist*, 55(1), 170-183.
- Learning, C. f. A. S. a. E. (2008). *Social and emotional learning and student benefits: Implications for the Safe-School/Healthy Students core elements*. Collaborative for Academic, Social, and Emotional Learning.
- Lee, V. E., & Burkham, D. T. (2003). Dropping out of school: The role of school organization and structure. *American Educational Research Journal*, 40(2), 353-393.
- Lloyd, D. N. (1976). *Concurrent Prediction of Dropout and Grade of Withdrawal: Educational and Psychological Measurement*.
- Loukas, A., Roalson, L. A., & Herrera, D. E. (2010). School connectedness buffers the effects of negative family relations and poor effortful control on early adolescent conduct problems. *Journal of Research on Adolescence*, 20(1), 13-22.
- Maddoux, J. E. (2002). Stopping the madness: Positive psychology and the deconstruction of the illness ideology and the DSM. In C. R. Syner & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 13-25). New York:NY: Oxford University Press.

- 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*(1), 327-365.
- Martin, A. J., & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools, 43*(3), 267-281.
- Masten, A. S., Garmezy, N., Tellegen, A., Pellegrini, D. S., Larkin, K., & Larsen, A. (1988). Competence and stress in school-children: The moderating effects of individual and family qualities. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 29*(6), 745-764.
- Miller, D. N., Gilman, R., & Martens, M. P. (2008). Wellness promotion in the schools: Enhancing students' mental and physical health. *Psychology in the Schools, 45*(1), 5-15.
- Mullen, K. D. (1986). Wellness: The missing concept in health programming for adults. *Health Values, 10*(34).
- Myers, J. E., Luecht, R. M., & Sweeney, T. J. (2004). The factor structure of wellness: Reexamining theoretical and empirical models underlying the Wellness Evaluation of Lifestyle (WEL) and the Five-Factor WEL. *Measurement and Evaluation in Counseling and Development, 36*, 194-208.
- Nelson, B., Schnorr, D., Powell, S., & Huebner, S. (In Press). Building resilience in schools. In R. Christner, R. Menufi & A. Freeman (Eds.), *Cognitive-*

Behavioral Interventions in Educational Settings: A Handbook for Practice. Routedledge, NY.

Nelson, B., Jimerson, S., Lam, S., Asamsama, O. H., Wiest, D., Schnorr, D., et al. (2010). *Wellness factors contributing to student engagement at school*. Paper presented at the Annual Convention of the American Psychological Association.

Nelson, R. B., Campbell, J. S., Nelson, D. L., & Schnorr, D. L. (2009). Exploring the importance of the advisee and advisor bond. *Advances in School Mental Health Promotion, 2*(3), 46-55.

Pallant, J. (2010). *SPSS survival manuel: A step by step guide to data analysis using SPSS* (4th ed.). New York: Allen and Unwin Book Publisers.

Payton, J., Weissberg, R. P., Durlack, J. A., Dymnicki, A. B., Taylor, R. D., Schellinger, K. B., et al. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews*. Chicago: Collaborative for Academic, Social, and Emotional Learning.

Pennsylvania, U. o. (2011). Positive Psychology Center. from <http://www.ppc.sas.upenn.edu/>

Pittman, K. (2011). About promoting youth development in schools. 2011, from <http://smhp.psych.ucla.edu/>

Renger, R. F., Midyett, S. J., Mas, F. G. S., Erin, T. D., McDermott, H. M., Papenfuss, R. L., et al. (2000). Optimal living profile: An inventory to

assess health and wellness. *American Journal of Health Behavior*, 24(6), 403-412.

Rodriguez, L. F. (2010). What schools can do about the dropout crisis.

Leadership, 40(1), 18-22.

Rodriguez, L. F., & Conchas, G. Q. (2009). Preventing truancy and dropout among urban middle school youth: Understanding community-based action from the student's perspective. *Education and Urban Society*, 41(2), 216-247.

Roehlkepartain, E. C., Hong, K. L., & Scales, P. C. (2005). Boosting student achievement by building developmental assets: New research strengthens the case. *Minnesota School Boards Association Journal*, 58(2), 16-18.

Roeser, R. W., Galloway, M., Casey-Cannon, S., Watson, C., Keller, L., & Tan, E. (2008). Identity representations in patterns of school achievement and well-being among early adolescent girls: Variable- and person-centered approaches. *Journal of Early Adolescence*, 28(1), 115-152.

Roscoe, L. J. (2009). Wellness: A review of theory and measurement for counselors. *Journal of Counseling & Development*, 87(2), 216-226.

Rotermund, S. (2007). *Why students dropout of school: Comparisons from three national surveyys*. Santa Barbara: University of California, Santa Barbara.

- Rumberger, R. W., & Arellano, B. (2007). *Student and school predictors of high school graduation in California*. Santa Barbara: University of California, Santa Barbara.
- Rumberger, R. W., & Lim, S. A. (2008). *Why students drop out of school: A review of 25 years of research*. Santa Barbara: University of California, Santa Barbara.
- Rumberger, R. W., & Rotermund, S. (2009). *Ethnic and gender differences in California high school graduation rates*. Santa Barbara: University of California, Santa Barbara.
- Scales, P. C., & Roehlkepartain, E. C. (2003). *Boosting student achievement: New research on the power of developmental assets*. Minneapolis: Search Institute.
- Sciences, N. C. f. E. S. I. o. E. (2002). *The condition of education 2002*. Washington, D.C.: United States Department of Education.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14.
- Silver, D., Saunders, M., & Zarate, E. (2008). *What factors predict high school graduation in the Los Angeles Unified School District?* Santa Barbara: University of California, Santa Barbara.
- Smith-Adcock, S., Webster, S. M., Leonard, L. G., & Walker, J. L. (2008). Benefits of a holistic group counseling model to promote wellness for girls

at risk for delinquency: An exploratory study. *Journal of Humanistic Counseling, Education & Development*, 47(1), 111-126.

Smrtnik-Vitulic, H., & Zupancic, M. (2011). Personality traits as a predictor of academic achievement in adolescents. *Educational Studies*, 37(2), 127-140.

Stormont, M., Reinke, W. M., & Herman, K. C. (2009). Introduction to the special issue: Using prevention science to address mental health issues in schools. *Psychology in the Schools*, 41(1), 1-4.

Sullivan, A. (2001). Cultural capital and educational attainment. *The Journal of the British Sociological Association*, 35(4), 893-912.

Swanson, C. B., & Chapli, D. (2003). *Counting high school graduates when graduates count: Measuring graduation rates under the high stakes of NCLB*: Urban Institute.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (Fifth ed.). Boston: MA: Pearson.

Thomas, M. R., Dyrbye, L. N., Huntington, J. L., Lawson, K. L., Novotny, P. J., Sloan, J. A., et al. (2007). How do distress and well-being relate to medical student empathy? A multicenter study. *Journal of General Internal Medicine*, 22(2), 177-183.

Warin, J., & Muldoon, J. (2009). Wanting to be 'known': Redefining self-awareness through an understanding of self-narration processes in

educational transitions. *British Educational Research Journal*, 35(2), 289-303.

Weissberg, R. P., & O'Brien, M. U. (2004). What works in school-based social and emotional learning programs for positive youth development. *Annals of the American Academy of Political and Social Science*, 591, 86-97.

Weist, M. D., Stiegler, K., Stephan, S., Cox, J., & Vaughan, C. (2010). School mental health and prevention science in the Baltimore City Schools. *Psychology in the Schools*, 47(1), 89-100.

Weller-Clarke, A. (2006). A critical analysis of the child and adolescent wellness scale (CAWS). Benedictine University.

Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. *Child Development*, 62(5), 1066.

Werner, E. E. (1996). Vulnerable but invincible: High risk children from birth to adulthood. *European Child & Adolescent Psychiatry*, 5, 47-51.

Whitney, S., Splett, J. W., & Weston, K. J. (2008). An empirical examination of the resiliency wheel. *Advances in School Mental Health Promotion*, 1(2), 41-48.

Wright, B., & Lopez, S. (2002). Widening the diagnostic focus. In C. R. Synder & S. J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 26-44). New York: NY: Oxford University Press.

Wright, P. M., Weidong, L., Sheng, D., & Pickering, M. (2010). Intergrating a personal and social responsibility program into a wellness course for

urban high school students: Assessing implementation and educational outcomes. *Sport, Education and Society*, 15(3), 277-298.

Yazzie-Mintz, E. (2009). *Engaging the voices of students: A report on the 2007 & 2008 high school survey of student engagement*. Bloomington: Indiana University.

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25, 82-91.

Zimmerman, B. J., Bandura, A. T., & Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*, 29(3), 663-676.

Zvoch, K. (2006). Freshman year dropouts: Interactions between student and school characteristics and student dropout status. *Journal of Educational for Students Placed At Risk*, 11(1), 97-117.