AN EXAMINATION OF PYSCHOSOCIAL ADJUSTMENT AND COPING STRATEGIES OF ADOLESCENTS ENROLLED IN ACCELERATED LEARNING PROGRAMS

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AUTHORIZATION TO SUBMIT

DISSERTATION

This dissertation of Mary Dowski, submitted for the degree of Doctor of Philosophy in Education with a major in Educational Leadership and titled AN EXAMINATION OF PYSCHOSOCIAL ADJUSTMENT AND COPING STRATEGIES OF ADOLESCENTS ENROLLED IN ACCELERATED LEARNING PROGRAMS has been reviewed in final form. Permission, as indicated by the signatures and dates given below, is now granted to submit final copies.

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DEDICATION

This dissertation is dedicated in loving memory to my aunt, Alice Miazga, and my brother, Mike Dowski. My aunt was a mentor when I did not realize I needed one; and without children of her own, she spoiled all of her nieces and nephews. After I graduated from Kelley Business Institute, and before I started my Bachelor's degree in elementary education, she gave me a card that I treasure to this day. In it she wrote, "…we hope this is the start and you will go on and complete your studies and hopefully someday maybe we will have another doctor in the family…" She died shortly after my graduation from Buffalo State College. My brother inspired me in many ways. He was born with a brain injury; however, he never let his cognitive impairment or seizure disorder get in his way of achieving his goals. He had a passion for life and his animals, and he positively impacted many people's lives.

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ABSTRACT

As more opportunities abound for students to accelerate their learning during middle and high school, research is limited in the relationship between accelerated learning and the psychosocial adjustment of adolescents. This explanatory correlation research study provided additional empirical evidence of the relationship between accelerated studies, psychosocial adjustment, and the coping strategies adolescents utilize. Participants were 93 eighth to twelfth grade students enrolled in accelerated learning courses in a northwestern state in the United States. Students were administered instruments measuring their perceptions of: stress, life satisfaction, internalizing and externalizing behaviors, suicidal ideation, academic beliefs and task values, school climate, and coping strategies. Correlation coefficients determined relationships between psychosocial adjustment, age, number of accelerated learning program classes, gender and coping variables of students participating in accelerated learning programs. Results suggest that additional research is needed in the exploration of the relationship between number of accelerated learning program classes adolescents participate in and their psychosocial adjustment. Gender had few significant relationships to other variables and grade level correlated with psychological factors, life satisfaction, motivation, school climate, and grade point average. There were statistically significant, strong to weak correlations amongst psychosocial adjustment variables; and in particular, an intricate association between psychological indicators of possible mental health issues, stress, life satisfaction, school functioning, age, and coping strategies.

Keywords: accelerated learning, psychosocial adjustment, adolescent, stress, psychosocial functioning, school functioning, adolescence, Expectancy-value model

TABLE OF CONTENTS

ACKNOWLEDGEMENTS iv

DEDICATION v

ABSTRACT vi

Chapter I

Introduction 1

Statement of the Problem 5

Background to the Study 6

Research Questions 8

Description of Terms 9

Significance of the Study 12

Overview of Research Methods 13

Conclusion 18

Chapter II The Literature Review

Introduction 20

Theoretical Framework 21

The Description of Accelerated Learning Programs 29

Stress and its Effects on Adolescents 32

Adolescent Psychosocial Functioning 35

Adolescent School Functioning 43

Coping Strategies Associated with Students Including High Achieving Students 51

Conclusion 57

Chapter III Design and Methodology

Introduction 59

Research Questions 60

Research Design 60

Participants 61

Data Collection 63

Measures 65

Analytical Methods 71

Limitations & Delimitations 74

Roles of the Researcher 76

Chapter IV Results

Introduction 78

Quantitative Results 79

Chapter V Conclusion

Introduction 118

Summary of Results 118

Research Question #1 118

Research Question #2 123

Research Question #3 124

Research Question #4 125

Conclusions 126

Recommendation for Further Research 127

Implications for Professional Practices 130

References 132

Appendix A Figure 1 Permission for Use 144

Appendix B Figure 3 Permission for Use (Public Domain) 145

Appendix C Permission: School Districts.....146

Appendix D Parent Consent Form 147

Appendix E Student Assent Form 150

Appendix F Mental Health & Suicide Prevention Resources.....152

Appendix G HRRC Approval Letter 153

Appendix H Perceived Stress Scale – 10 item (PSS-10) 154

Appendix I Pediatric Symptoms Checklist Youth Report (PSC-Y) 155

Appendix J Multidimensional Students' Life Satisfaction Scale (MSLSS) 156

Appendix K Adolescent-Coping Orientation for Problem Experiences (ACOPE) 158

Appendix L Student Attitude Questionnaire (Ability Beliefs & Subjective Task Values) 159

Appendix M School Climate Survey 162

Appendix N Student Demographic Form 165

Appendix O Certification of Completion 166

Appendix P Adolescent Suicidal Ideation & Suicide Attempts by Gender, Age, & Grade 167

Appendix Q Correlation Coefficients Matrix: Psychosocial Adjustment Variables 168

Appendix R Descriptive Statistics by Number of ALP Classes 169

Appendix S Linear Regression Results.....171

Appendix T Tukey HSD: MSLSS One-Way ANOVA 172

LIST OF TABLES

Table 1 *Researcher and Theorist Contributions to "Lives in School Context" Model and ALP Research*.....24

Table 2 *Similarities Between Coping Strategies Used by Adolescents* 56

Table 3 *Test of Normality of Psychosocial Adjustment by Age Variables*.....83

Table 4 *Correlation Coefficients of Psychosocial Adjustment & Other Variables* 84

Table 5 *Correlation Coefficients of Parent Support & Attendance*.....85

Table 6 *Research Study's Sample Demographics by Grade Level*.....89

Table 7 *Grade Level Study Participants by Age*.....89

Table 8 *Study Sample's Distribution of Enrollment in ALP Classes*.....90

Table 9 *Spearman rho Results: PSC-Y & Grade Level Correlations*.....94

Table 10 *Spearman rho Results: MSLSS & Grade Level Correlations*.....95

Table 11 *Correlation Coefficients of Student Beliefs & Values* 101

Table 12 *School Climate Correlation Coefficients: Grade Level*.....101

Table 13 *Student Motivation & Number of ALP Classes* 104

Table 14 *School Climate Correlation Coefficients: Number of ALP Classes* 105

Table 15 *GPA, Attendance, Number of ALP Classes Descriptive Statistics* 106

Table 16 *Testing for Normality: MSLSS Factors* 110

Table 17 *Mean Values & Standard Deviations: MSLSS Domains*.....111

Table 18 *Rank-biserial Correlation of Gender & Student Motivation*.....112

Table 19 *Coping Strategies of Adolescents in ALPs*.....117

Table 20 *Descriptive Statistics of Coping Strategies*.....117

LIST OF FIGURES

Figure 1 *Eccles et al. (1983) Expectancy-Value Model of Achievement Motivation*.....3

Figure 2 *Data Analysis: Study Variables*.....14

Figure 3 *Theoretical Framework: "Lives in School Context"* 23

Figure 4 *Psychosocial Adjustment (EGO) of ALP Adolescents*.....28

Figure 5 *Scatterplots of Linear Relationships of Psychosocial Adjustment Variables*.....81

Figure 6 *Prediction Interval of PSS-6 and PSC-Y*.....88

Figure 7 *Number of ALP Classes by Grade Level* 91

Figure 8 *Comparison of MSLSS Means Across Grade Levels*.....95

Figure 9 *MSLSS Scale Score Means Comparison Across Grade Levels*.....96

Figure 10 *One-way ANOVA MSLSS Scale, School & Living Environment Domains* 98

Figure 11 *Examples of Monotonic Relationships* 100

Figure 12 *Scatterplots of Grade Level Monotonic Relationships with GPA* 102

Figure 13 *MSLSS and Number of Classes Monotonic Relationship Scatterplot* 103

Figure 14 *Boxplots: Checking for Outliers*.....108

Figure 15 *Student Suicidal Ideation & Attempts by Gender*.....109

Figure 16 *Middle School, Early High School, & High School GPAs*.....115

Figure 17 *Psychosocial Adjustment Variables and Their Similar Relationships* 121

Figure 18 *Student Motivation & School Climate Variables* 122

Chapter I

Introduction

Early adolescence is a precarious period of life (Moulds, 2003; Roeser, van der Wolf, & Strobel, 2001). Between the ages of 10 and 14, children are developing mature relationships with their parents and deepening relationships with their peers. Their bodies are evolving, hormones are raging, and emotions can be erratic. Cognitively, their ability to abstractly reason is expanding (Roeser, Eccles, & Sameroff, 2000). Then, adolescence begins.

Adolescence is a time of great changes in development (Klimstra, Hale, Raaijmakers, & Meeus, 2012; Moksnes, Espnes, & Haugan, 2014). Not only facing puberty, adolescents are faced with academic, social and emotional, and environmental challenges (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003; Moulds, 2003; Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009). According to the National Youth Risk Behavior Survey (2015) adolescents self-reported engaging in risky behaviors including: 21.7% have smoked marijuana in the past 30 days, 32.8% have used alcohol in the past 30 days, and 13.8% of the 30.8% of teenagers who have been sexually active used no form of birth control (Centers for Disease Control and Prevention, 2015). Additionally, up to one-third of adolescents suffer from depression with 30% having experienced feelings of sadness or hopelessness, 14.6% made a plan to complete suicide, 8.6% have attempted suicide, (Centers for Disease Control and Prevention, 2015), and one in ten adolescents exhibit moderate to severe symptoms of depression that can manifest into similar disorders in adulthood (Robertson, 2013; Stuart, 2006). While not all adolescents will experience extreme hardships during this time, those that do may have long-term effects in their academic and psychosocial functioning areas (De Wit, Karioja, Rye, & Shain, 2011; Evans et al., 2015; Roeser et al., 2001; Stuart, 2006). Furthermore, academic failure can lead to low self-

esteem, substance use or suicidal ideation (Sanders, Field, & Diego, 2001; Stuart, 2006; Sun & Hui, 2007).

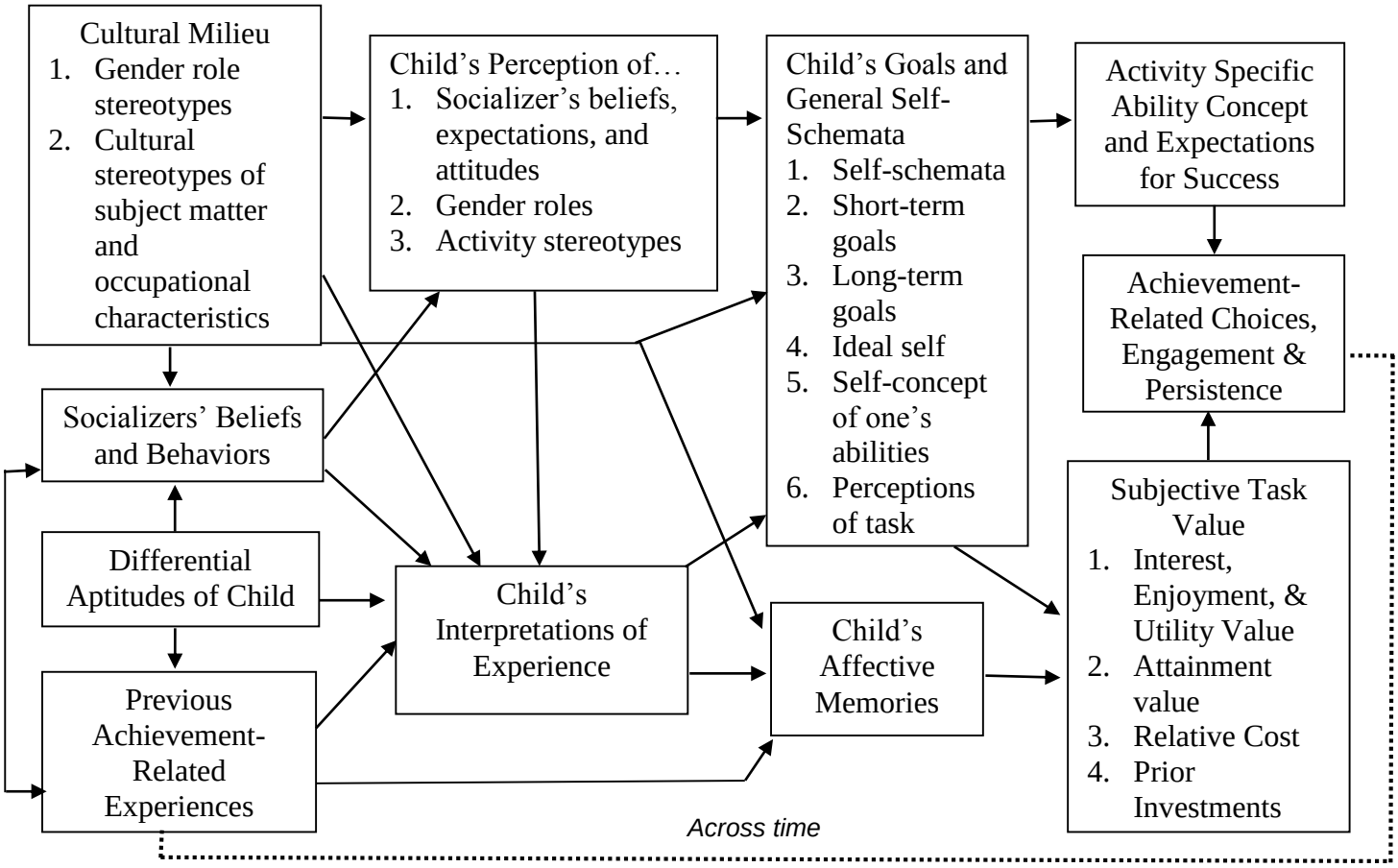
Emotional development and increasing independence from family is occurring during adolescence (Larson & Brown, 2007). Teenagers spend much of their time in a school environment where some thrive, some cope, and some find it the most difficult place to be (Eccles & Roeser, 2011). School climate has long been associated with student academic achievement, social well-being, motivation, school conduct, and school satisfaction (Fan, Williams, & Corkin, 2011; Loukas & Robinson, 2004; Wang & Eccles, 2013). Wang and Eccles (2013) concluded that when students perceive a positive school climate including positive teacher to student relationships, and the school is meeting their academic needs, students' capacity to succeed increase. Also, when students can regulate their learning, are interested in academic topics, and value the work being asked of them, higher levels of school engagement are reported (Wang & Eccles, 2013). Sense of belonging was also a strong predictor of self-esteem and depression with depression strongly correlating to suicidal ideation (Portes et al., 2002; Sun & Hui, 2007). When students develop affirming relationships with peers and teachers, and have positive in-school experiences, their future expectations improve (Israelashvili, 1997; Suldo, Riley, & Shaffer, 2006). Thus, when schools meet the psychosocial needs of students, motivation and interest will increase leading to higher academic achievement (Trautwein et al., 2012; Wang & Eccles, 2013).

Psychosocial theorists such as Erikson recognize "that humans are biological *and* social *and* psychological and that it is the interactive mix of these inner and outer forces that, along a continuum of developmental stages, combine to shape the human psyche" (Hamachek, 1988, p. 360). Self-perceptions from previous experiences, gender role and cultural stereotypes, and social

influences impact personal beliefs (Eccles, 2009; Wigfield & Eccles, 2000). Together, these principles are portrayed through Eccles et al. (1983) model of Expectancy-value theory (EVT) where one's beliefs about succeeding at a task (expectancy) and the reason for engaging in a task (value) (Clinkenbeard, 2012; Trautwein et al., 2012) predict academic performance and choice as shown in Figure 1 (Gaspard et al, 2015).

Figure 1.

Eccles et al. (1983) Expectancy-Value Model of Achievement Motivation



Adapted from Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25,* p. 69 and A. Wigfield (personal communication, January 29, 2016). Public domain permission, see Appendix A.

Greater motivation and achievement comes from higher expectancies of success (Clinkenbeard, 2012; Xiang, McBride, & Bruene, 2004). Task value categories of the EVT

model include: intrinsic value described as “enjoyment a person derives from doing a task” (Gaspard et al., 2015, p. 664); attainment value, (the amount of importance a person puts towards a task); utility value, (the usefulness of the task towards one’s short and long-term goal); and cost, the “perceived negative consequences of engaging in a task” (Gaspard et al, 2015, p. 664) (Gaspard et al., 2015). In summary, the Expectancy-value model (Figure 1) valuing task includes one’s interest, the feeling of importance of the task and the investment of doing it (Clinkenbeard, 2012; Trautwein et al., 2012) based upon earlier experiences and beliefs (Wigfield & Eccles, 2000).

Early adolescent and adolescent students (hereafter identified as adolescents when referring to both age groups) enrolled in accelerated learning programs, (programs that provide challenging academic curriculum to students, may include college bearing credit, or may be taken by students to accelerate their learning to graduate earlier from high school), may have additional stressors in comparison to their peers (Shaunessy & Suldo, 2010; Suldo, Shaunessy, & Hardesty, 2008; Suldo, Shaunessy-Dedrick, Roth, & Ferron, 2015; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013b). Suldo and Shaunessy-Dedrick (2013a) stated that previous studies from 2006-2009 illustrated that 40% of International Baccalaureate® (IB®) program students saw the academic rigor as extreme, insurmountable and the program’s studies negatively impacted their psychosocial well-being. While a rigorous curriculum in high school may be the best indicator of success in college, (An, 2013; Hoyt & Sorensen, 2001; Young, Joyner, & Slate, 2013), more research is needed in the psychosocial adjustment, (the combination of psychopathology, relationships, life satisfaction, academic achievement, academic motivational beliefs, school climate perception, and in-school behavior into one multi-variable concept), of students participating in accelerated learning programs and the

coping strategies they utilize (Shaunessy & Suldo, 2010; Suldo, Shaunessy, & Hardesty, 2008; Suldo & Shaunessy-Dedrick, 2013a).

Statement of the Problem

According to Erickson's stages of psychosocial development, adolescents experience more stress than in any other period of human development (Portes, Sandhu, & Longwell-Grice, 2002). Adolescence is a transitional period where teenagers are vulnerable to a myriad of obstacles regarding self-identity, peer relationships, puberty, family dynamics, school transitions, increased academic demands, and environmental and psychological factors (Bandura et al., 2003; Robertson, 2013; Roeser et al., 2000; Suldo, Shaunessy, & Hardesty, 2008; Wiklund, Malmgren-Olsson, Bergström, & Fjellman-Wiklund, 2012). Thus, they are at danger for engaging in high-risk behaviors such as substance abuse and pregnancy; as well as feelings of hopelessness, mood disorders and suicidal ideation (Portes et al., 2002; Roeser et al., 2000; Stuart, 2006). Participating in academically rigorous programs has been shown to increase high achieving adolescents' stress levels (Suldo, Shaunessy, & Hardesty, 2008; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013b; Shaunessy-Dedrick, E., Suldo, S., Roth, R., & Fefer, S, 2014). However, research examining the relationship of rigorous academic studies and the psychosocial adjustment of high achieving adolescents is in its infancy (Suldo & Shaunessy-Dedrick, 2013a).

There is a substantial lack of empirical evidence that examines high achieving students' psychosocial adjustment in accelerated learning programs (Shaunessy-Dedrick et al., 2014; Suldo et al., 2015; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013a). Previous studies have been conducted with small student sample sizes that are not able to be generalized to students in other academically rigorous programs or geographical regions (Nounopoulos, Ashby, & Gilman, 2006; Shaunessy, Suldo, Hardesty, and Shaffer, 2006; Suldo & Shaunessy-Dedrick, 2013a). In

addition, these studies have focused primarily on adolescents in high school accelerated learning programs, excluding middle school populations. However, programs like the State Intervention Programs (SIP) target middle school and early high school students who can begin an accelerated learning pathway leading them to early completion of high school requirements and earlier exposure to college credit courses. Psychosocial adjustment of early adolescents needs to be examined as part of the accelerated learning phenomenon with increasing popularity of SIP for younger students.

The purpose of this study was to study the psychosocial adjustment and coping strategies of middle school and high school students participating in accelerated learning programs. Through an exploratory correlation quantitative study examining a stratified sample of adolescents participating in accelerated learning programs, psychosocial adjustments and coping strategies of high achieving students may be better understood. With this knowledge, researchers may be able to generalize the results to other geographical and accelerated learning settings as well as examine individual traits of academic and social-emotional functioning of these students. This may benefit school administrators and school counselors in recognizing the psychological well-being of middle school and high school students thus allowing them to mitigate negative symptoms through the detection of protective factors and implementation of supportive and intervention programs (Shaunessy & Suldo, 2010; Suldo et al., 2009).

Background to the Study

Dual credit programs have been examined as to their effects upon academic achievement and college preparedness (An, 2015; Giani, Alexander, & Reyes, 2014; Hoffman, 2003; Hoffman, Vargas, & Santos, 2009; Hughes, Rodriguez, Edwards, & Belfield, 2012; Puyear, Thor, & Mills, 2001; Shepherd, 2008; Speroni, 2011; Venezia & Jaeger, 2013). Research has established that

students in dual credit classes in high school have higher graduation rates, are better prepared for college and need less remedial classes in college, and are twice as likely to graduate from college than their non-dual credit peers (Stevenson, Winograd, & Gonzales, 2012; Young et al., 2013). Studies conducted as to dual credit program effects on the psychosocial adjustment of adolescents has been limited.

This study expanded upon previous research conducted by Suldo and Shaunessy-Dedrick (2013) and existing studies, (Robertson, 2013; Shaunessy-Dedrick et al., 2014; Shaunessy & Suldo, 2010; Shaunessy, Suldo, & Friedrich, 2011; Suldo, Shaunessy, & Hardesty, 2008; Suldo et al., 2009) in determining the relationship between accelerated learning programs and the psychosocial adjustment of participating middle and high school students. Giani et al. (2014) investigated the variables of students' ages and number of college level classes and Arsenio & Loria (2014) examined how with age, students were better equipped to control academic stress. This study may add additional research and add new research in determining correlations amongst age of student, gender, the number of accelerated learning classes, and the psychosocial adjustment of adolescents.

Positive psychosocial functioning and school satisfaction are essential to the well-being of students and related to academic success (Robertson, 2013; Sun & Hui, 2007; Trautwein et al., 2012). Peer relationships, internalized emotional distress (depression, anxiety), stress, psychological well-being, and life satisfaction also determine adolescents' well-being (Long, Huebner, Wedell, & Hills, 2012; Shaunessy et al., 2006; Suldo, Shaffer, & Riley, 2008). Shaunessy et al. (2006) in a study of 176 general education students and 122 International Baccalaureate® students found that IB® students had more positive school climate perceptions. They were more confident in their school abilities, achieved higher grades, self-managed

learning behaviors and were less likely to affiliate with negative peers. Their general education peers reported negative perceptions of how the school functioned, including sharing of resources and student behavior. While psychosocial distress has been shown to be negatively related to school functioning, (Roeser et al., 2001; Sun & Hui, 2007), research is sparse in the relationship between psychosocial adjustment and students participating in accelerated learning programs (Shaunessy- Dedrick et al., 2014; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013a).

Additionally, coping strategies used by students enrolled in IB® programs has been meagerly researched even though students in IB® programs have been found to have higher levels of perceived stress than their general education peers (Shaunessy & Suldo, 2010; Suldo & Shaunessy-Dedrick, 2013b). Coping strategies used by accelerated learners need examination to understand their effects on psychosocial functioning (Shaunessy & Suldo, 2010; Shaunessy-Dedrick, Suldo, Roth, & Fefer, 2014). Early research indicates adolescents can mitigate the effects of stress they experience in accelerated learning programs and thus, the coping strategies used by these students need further exploration and will be addressed in this study (Shaunessy & Suldo, 2010; Suldo & Shaunessy-Dedrick, 2013a).

Research Questions

The purpose of this study was to study the psychosocial adjustment and coping strategies of middle school and high school students in accelerated programs. Through an exploratory correlation quantitative study examining a stratified sample of adolescents participating in accelerated learning programs; psychosocial adjustments and coping strategies of high achieving students may be better understood. This study may add to the minimal research in the area of psychosocial adjustment of students enrolled in accelerated learning programs guided by its research questions.

Research questions narrow the purpose statement into questions that the researcher aims to answer in the study (Creswell, 2015; Marshall & Rossman, 2016). There is limited research on the subject of the psychosocial functioning and coping strategies of adolescents enrolled in accelerated learning programs. Age of the participants or the number of accelerated learning program (ALP) classes they are participating in and the relationship to psychosocial functioning have not yet been fully explored. In this study, the following questions focus on the subject. They include:

1. What are the relationships between psychosocial adjustment variables of adolescents enrolled in accelerated learning programs?
2. What is the relationship between the psychosocial adjustment of students in accelerated learning programs by grade level and by the number of accelerated learning program classes?
3. What is the relationship between the psychosocial adjustment of students enrolled in accelerated learning programs by gender?
4. What coping strategies are being used by students in accelerated learning programs?

Definitions of Terms

Words can have multiple meanings. Defining and clarifying terminology used in this study that may not be readily utilized outside the realm of education assists the reader (Creswell, 2014). The following is a list of research-based terms used in this study.

Academic Motivational Belief. A person's intrinsic and extrinsic forces, learning beliefs and self-efficacy towards academics and learning (Singh, 2014).

Accelerated Learning Programs (ALP). An academically rigorous curriculum program that allows middle school students to advance their learning at a self-determined pace and allows

high school students to not only advance their learning, but earn college credits while in high school.

Adolescence. The developmental period from eleven to eighteen years of age and school grades of seventh to twelfth.

Advanced Placement® (AP®). College level curriculum taught by high school teachers in the high school setting. A national end-of-course exam is administered and the grade obtained is translated into college credit (CCRS Center, 2013).

Coping. Mechanisms that are in place, prior to a stressful situation, that mitigate the effects of stress including how one interacts with situations over their lifespan (Seiffge-Krenke et al., 2009).

Dual or Concurrent Credit (DC). College level curriculum taught by high school teachers, approved by the colleges issuing credits, in high school settings (CCRS Center, 2013).

Dual Enrollment (DE). Students enrolled in colleges earning dual credits while also being enrolled in high school earning high school credit towards high school graduation (CCRS Center, 2013).

Early Adolescence. Youth ages 10 – 14 (Roeser, Strobel, & Quihuis, 2002).

Ego. According to Erikson's theory, ego is the part of the self that is in contact with the outside world through cognitive processes (Hamacheck, 1988). It develops though eight psychosocial stages from birth to retirement years with adolescence identified as the "Identity versus Identity Confusion" stage (Hamachek, 1988). In the school setting, ego is equivalent to adolescents' psychosocial adjustment. (Roeser et al., 2000).

Ethos. Social opportunities adults present to adolescents according to Erik Erikson (Roeser et al., 2000). In the school setting, ethos is in part represented by the adolescents' perceptions of school climate.

International Baccalaureate® (IB®). IB® programs offer accelerated learning with end-of-course exams leading to an IB® diploma to high achieving and gifted students. The program also addresses the social-emotional needs of students through service activities, extracurricular activities and humanities performances (CCRS Center, 2013).

Professional or Career Technical Education (PTE/CTE). Studies in technical education that allow students to enter the work force directly after high school, (and usually with an accumulation of dual credits), with technical certification earned in skilled programs (CCRS Center, 2013).

Psychosocial Adjustment. The combination of psychosocial functioning and school functioning indicators into one multi-variable concept (Shaunessy et al., 2006; Suldo & Shaunessy-Dedrick, 2013a).

Psychosocial Functioning. The blending of psychopathology, peer relationships, and life satisfaction indicators into one multi-variable concept (Suldo & Shaunessy-Dedrick, 2013a).

School Functioning. A multi-variable concept that includes the indicators of academic achievement, academic motivational beliefs, school climate perception (or attitude towards school), and in-school behavior into (Roeser et al., 2000; Shaunessy et al., 2006; Suldo & Shaunessy-Dedrick, 2013a).

State Incentive Programs (SIP). Programs aimed at accelerating learning of younger students in order to complete dual credit programs or early graduation programs

Significance of the Study

Education continues to evolve in the 21st century. Students must be critical thinkers, problem solvers, and evaluate, rather than recall, the information presented (Richardson, 2007). Through accelerated learning programs, advanced learners are challenging their intellect and creating a smooth transition to college (Puyear et al., 2001). However, participation in accelerated learning programs has shown to elevate perceived stress levels (Robertson et al., 2013; Suldo & Shaunessy-Dedrick, 2013a; Suldo & Shaunessy-Dedrick, 2013b). Nevertheless, limited research has also shown that while perceived stress may be higher than general education peers, students participating in accelerated learning programs have similar or even higher psychosocial functioning (Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009; Suldo & Shaunessy-Dedrick, 2013a).

Suldo and Shaunessy-Dedrick (2013a) asserted that the empirical data related to psychosocial functioning and accelerated programs is limited. While it is acknowledged that students experience additional stressors in ALPs, (Shaunessy & Suldo, 2010; Suldo, Shaunessy, & Hardesty, 2008; Suldo, Shaunessy-Dedrick, Roth, & Ferron, 2015; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013b), minimal research has been completed outside of studies with students in one type of ALP, the International Baccalaureate program, in discovering the coping strategies the ALP students are utilizing to mitigate those stressors. This study will utilize students enrolled in SIPs, dual credit programs and Advanced Placement programs. By studying the ALP phenomenon, additional research can provide more knowledge to educators and assist them in recognizing the possible psychosocial and school functioning issues to support accelerated learners. Additionally, examining early adolescents

in accelerated learning programs in relationship to psychosocial functioning is needed as the popularity of programs afforded to this age group expands.

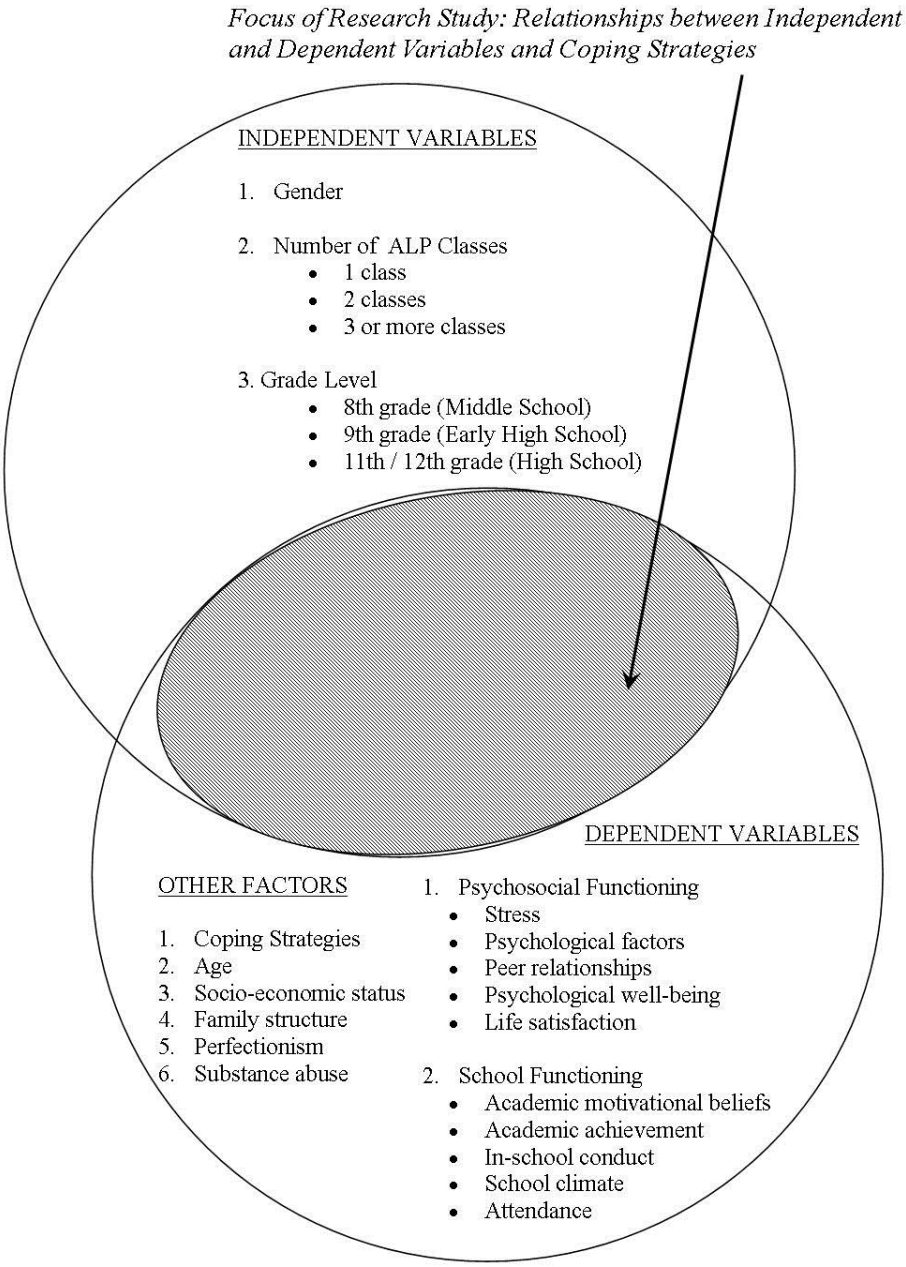
Overview of Research Methods

This explanatory correlation research study examined adolescents participating in accelerated learning programs, their psychosocial adjustment, and how their grade level, number of ALP classes, and gender related to their psychosocial adjustment. Coping strategies used by the students and how they related to psychosocial adjustment variables was also explored. Explanatory correlation designs consist of examining the associations of two or more variables to one another and how the changes in one variable are related to changes in the other (Creswell, 2015). These designs are used by researchers when correlations between variables are being investigated, data is collected during one administration, there is a single group, and participants' scores are gathered for each variable (Creswell, 2015). Correlation research does not examine causal relationships, instead examining the covariance that the variables share (Salkind, 2014). Data analysis included correlation statistical testing and conclusions were deduced from the research results (Creswell, 2015).

As depicted in Figure 2, relationships studied included the independent variables (grade level, gender, and the number of ALP classes in one academic semester), and the variables (psychosocial and school functioning) that create the dependent variable, psychosocial adjustment. Correlational coefficients examined the relationships amongst the numerous psychosocial adjustment variables to detect relationships between them. The research also examined the coping strategies used by students in accelerated learning programs to identify such variables and to provide future direction to educators and researchers in mediating negative effects of accelerated learning programs.

Figure 2

Data Analysis: Study Variables



The target population was 9,434 students, grades seven to twelve, currently participating in accelerated learning programs in a Northwestern state. A stratified sample was selected from the participating school district's student population that granted permission to conduct the study. To generalize results, the sample size was a target of 100 to 150 students.

Study instruments were distributed by the researcher or research assistant in one sitting as an online survey integrating the various instruments into one tool. Psychosocial functioning instruments evaluated students' perceived stress, psychopathology, peer relationships and life satisfaction. Since students' report academics are one of the major stress events of their lives during adolescence, the Perceived Stress Scale 10 (PSS-10) (Cohen, 2008-revised) measured stress (Nounopoulus et al., 2006). The PSS-10 has a reliability/validity alpha .91 for youth (Suldo & Shaunessy-Dedrick, 2013a). To measure a variety of adolescents' psychosocial functioning areas including internalizing and externalizing behaviors and suicidal ideation, the Pediatric Symptoms Checklist – Youth report (PSC-Y) was administered. The PCS-Y has a strong discriminative validity and .45 test-retest reliability (Ontario Centre of Excellence for Child and Youth Mental Health, 2015). The Multidimensional Students' Life Satisfaction Scale (MSLSS) was utilized as an instrument that measured adolescents' overall happiness in life with family, friends, school, self, and living environment (Shaunessy et al., 2006). The MSLSS's reliability/validity was .79 to .92 (Suldo & Shaunessy-Dedrick, 2013a).

School functioning was measured through students' motivational beliefs, academic achievement, and school climate perceptions. To measure students' beliefs regarding academic and emotional self-efficacy including motivation, the Student Attitude Questionnaire of Ability Beliefs & Subjective Task Values was given. Based upon the expectancy-value theory of academic motivation, students' beliefs in their abilities will predict their success in academic

subjects and their perception of ask value in a certain subject such as math will delineate whether or not students' continuation of that subject throughout their education (Wigfield & Eccles, 2000). The Alpha coefficient of each construct were reported as follows: Perceived Task Value items (.76); Intrinsic Interest Value (.70); Attainment Value/Importance (.62); Extrinsic Utility Value (.92); Ability/Expectancy-Related items (.80); and Perceived Task Difficulty items (.78) (Eccles & Wigfield, 1995). Academic achievement (semester grade point average in math, English, science and social studies, and the number of accelerated learning program (ALP) classes and attendance) was obtained through semester report cards. For the purpose of this study, in-school behavior, a variable of academic achievement was not examined due to the inconsistencies of how behavior conduct is documented amongst the individual schools participating in the study. Demographic information including gender, age, and socioeconomic status was reported by the students during their online survey completion. Students' privacy was respected by coding the students' names in the study so that the researcher was unaware of individual students' personal information.

School climate surveys measure students' perceptions of the school climate including various areas such as: orderly school environment, positive learning environment, teacher-student relationships, peer relationships, instruction being well-developed and implemented, expectations for students, and collaboration between administration, faculty, and students (Fan et al., 2011; Loukas & Robinson, 2004). In this study, a students' scale was administered to determine their perceptions of teaching and learning, student relationships, emotional environment, and parent support. The subscale was constructed from a longer version of a state's school climate survey that was validated in empirical studies. However, due to the alteration of questions by omitting questions, credit to the survey or its psychometric measures are omitted as

requested by its authors. Internal consistency was determined by Cronbach's alpha where a value of 0.7 or higher denotes a high level of internal consistency. This research study's school climate survey's three of four factors, (emotional environment, student relationships, and teaching and learning), had internal consistencies of 0.7 or higher. Parent support was lower at 0.48 and one question eliminated resulting in an acceptable level of internal consistency. School climate represents a psychological indicator of school functioning (Suldo & Shaunessy-Dedrick, 2013a).

Coping strategies were evaluated by the administration of a revised Adolescent Coping Orientation for Problem Experiences (ACOPE) that identifies which coping behaviors are used by students in a variety of situations. The ACOPE was abbreviated from its original 52 questions to 19 questions as done in previous research of accelerated learning students. The ACOPE-19's four factor model includes: positive appraisal, negative avoidance, family communication, and anger (Suldo, Shaunessy, & Hardesty, 2008). The ACOPE-19's Cronbach's alpha has ranged from 0.69-0.76 for individual variables (Suldo, Shaunessy, & Hardesty, 2008).

Data collection procedures are important to ensure the participants understand the nature of the study, what their role is, and their permission to participate (Creswell, 2015). Informed consents were obtained by the sample participants, including parent approval if students were under legal age of consent (Creswell, 2015). All participants received $5.00 Amazon gift cards in reciprocity of completing the study's instruments. Permission to conduct the study was obtained from Northwest Nazarene University's Human Research Review Committee and the participating school district (Creswell, 2015; Marshall & Rossman, 2016).

Data analyses were conducted using SPSS version 24 after individual survey calculations were computed. An alpha level of .05 or .01 determined statistical significance. Finding relationships between the psychosocial adjustment variables, coping, and age variables, Pearson

moment-product correlation was conducted. To identify the relationships between interval measurements of age and number of ALP classes in one semester to the dependent variable, Spearman's rank-order correlation was utilized. Point-biserial correlations and rank-biserial correlations were performed to discover the association between gender and the dependent variable. Central tendencies were used to determine the use of coping strategies, ages and gender of students, and the number of ALP classes they were enrolled in during one academic semester.

Conclusion

Adolescence can be a confusing and troublesome time period in students' lives. As college preparedness gains popularity with rigorous accelerated learning programs that may cause additional stress to their lives, correlation between the psychosocial adjustment and these academic programs needs to be further investigated (Shaunessy-Dedrick et al., 2014). Previous research indicates that while additional academic stress can be associated with accelerated learning programs, students develop coping skills that can mitigate the effects of these stressors. However, research in this correlation and the coping strategies of adolescents in accelerated learning programs is minimal.

This research may add to research the relationships between stress and psychosocial and school functioning factors in adolescents enrolled in accelerated learning programs. The study intends to build upon previous research with a student sample that differs in geographic area and including younger aged students than most other studies. Results may assist administrators and school counselors in developing preventative services to students in accelerated programs to reduce stress levels, plan middle school and high school classes, and identify students that may require psychosocial support. It may also identify relationships between variables that can assist the practitioner in identifying school climate deficits that could be improved; and identify a need for

coping strategies and social-emotional skills training prior to adolescence preparing students for that transitional time.

Chapter II

The Literature Review

Introduction

There is an array of research regarding accelerated learning programs in high school and the positive effects they have on preparing students for success in post-secondary education (An, 2015; Giani et al., 2014; Hoffman, 2003; Hoffman et al., 2009; Puyear et al., 2001; Shepherd, 2008). Students enrolled in dual credit programs are achieving higher grade point averages the first year of college, staying in college longer, and requiring fewer remediation classes than their peers not enrolled in dual credit programs (An, 2015; Stevenson et al., 2012). Data is still emerging however, showing the correlation between accelerated programs that include dual credit, Advanced Placement, and International Baccalaureate programs and the psychosocial and school functioning of high school students (Robertson, 2013; Suldo, Shaunessy, & Hardesty, 2008; Suldo & Shaunessy-Dedrick, 2013a).

This chapter reviews literature on accelerated learning programs and adolescents' psychosocial adjustment. It provides a greater understanding of the relationship of accelerated learning programs and high achieving students' psychosocial adjustment within these programs by reviewing the limited empirical outcomes. Furthermore, literature was reviewed that explores coping strategies that adolescents are using in general education and accelerated learning programs. This chapter focuses on the concepts of six distinct sections: (1) Theoretical framework of the study, (2) The description of accelerated learning programs, (3) Stress and its effects on adolescents, (4) Adolescent psychosocial functioning and the impact of accelerated learning programs on high achieving students' psychosocial functioning, (5) Adolescent school functioning and the impact of accelerated learning programs on high achieving students' school

functioning, and (6) Coping strategies associated with students, including high achieving students.

Theoretical Framework

According to Erikson's developmental theory there are eight stages of psychosocial development, (ego development) from birth to senior citizen years:

1. Trust vs. Mistrust (birth to 18 months)
2. Autonomy vs. Shame and Doubt (18 months to 3 years)
3. Initiative vs. Guilt (3 to 6 years)
4. Industry vs. Inferiority (6 to 12 years)
5. Identity vs. Identity Confusion (12 to 20 years)
6. Intimacy vs. Isolation (20 to 35 years)
7. Generativity vs. Self-Absorption (35 years to retirement)
8. Integrity vs. Despair (retirement years)

(Hamachek, 1988, p. 355)

The ego is part of one's self or one's personality (Hamachek, 1988). The ego is the portion of the self that is "in contact with the outside world, through such cognitive processes as thinking, perceiving, remembering, reasoning, and attending…The extent to which people are more or less successful in doing these things is a reflection of the strength or weakness of their egos" (Hamachek, 1988, p. 354). Positive and negative life experiences in each stage shape the ego for the next stage (Hamachek, 1988). During the elementary to early middle school years (stage 4: Industry versus inferiority) children move from playing to work (school) (Earp, 2012). Feelings of failure and the sense of inferiority can arise when children cannot be successful in their school work (Earp, 2012). As they enter the fifth stage of adolescence, if

there are higher incidences of negative ego experiences from any or all of the prior stages, identity confusion and future life adjustment difficulties into adulthood can occur (Hamachek, 1988).

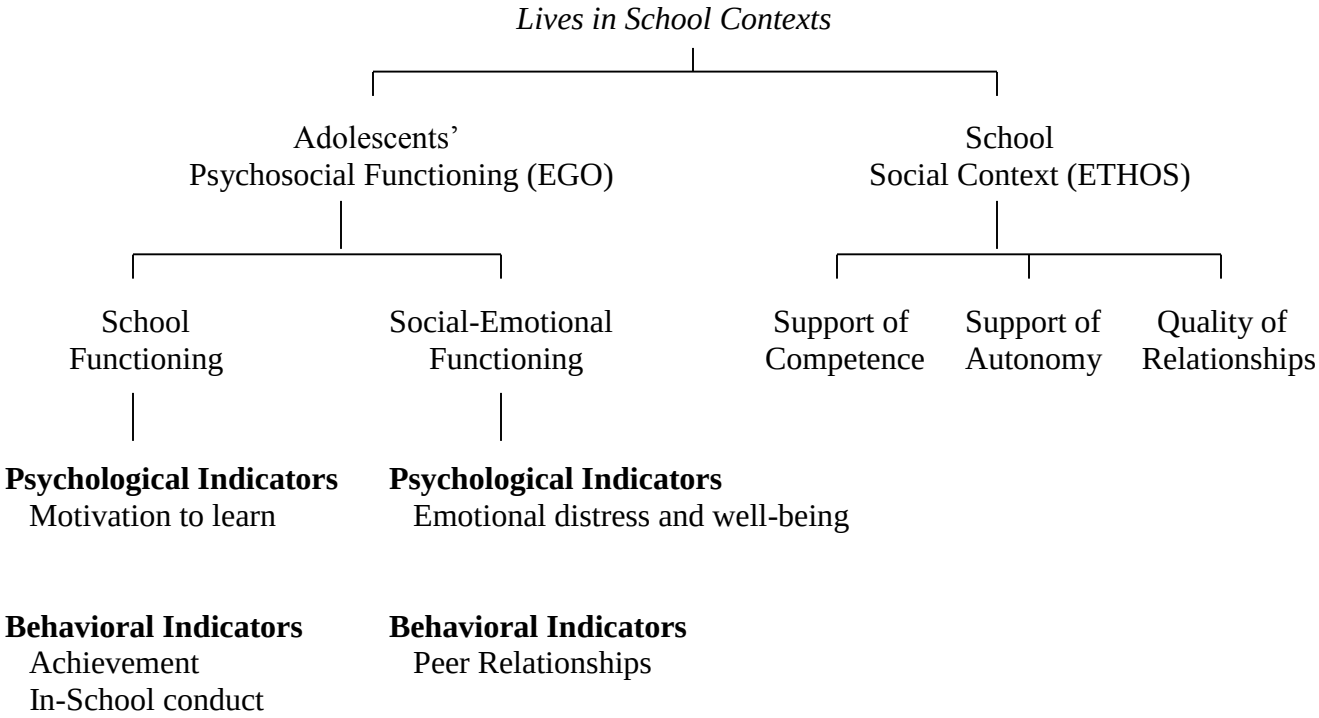
Erikson's fifth stage of psychosocial development, "Identity vs. Identity Confusion", occurs during adolescence (Hamachek, 1988). It is during this fifth stage that positive and problematic development can occur as adolescents determine who they are (Roeser et al., 2000; Taylor, 2011). Bronk (2011) asserts that during this stage adolescents are searching for purpose, with their purpose being the commitments they undergo towards personal achievements in life. Erikson's theory stresses that adolescent development is closely entwined with adulthood and that "identity development in adolescence (and adulthood) involves the overall configuration of ego needs and the social ethos of families, schools, and communities during a particular moment in history" (Roeser et al., 2000, p. 445). Adolescents' purpose may be the catalyst for students choosing to participate and engage in accelerated learning and their success in doing so as they move towards adulthood.

Integrating Erikson's theory of identity (stage 5) and how ego and ethos align together for successful identity development, Roeser et al. (2000) constructed a theoretical framework, *Lives in School Contexts* as shown in Figure 3. The model explains the relationship between adolescents' experiences in middle school (ethos) and their psychosocial and school functioning (ego) and how ethos and ego relate to students' experiences in education and over time (Roeser et al., 2000). By observing the fit between ethos and ego, this model may explain why some adolescents succeed both academically and social-emotionally during this transitional period of life (Roeser et al., 2000). Findings from Roeser et al.'s (2000) study found that students who achieved good grades felt confident in academics; adolescents who were well adjusted at school comprised of 40% of the

student sample and reported the highest self-esteem and affiliated mostly with positive peers. Improved academic and social-emotional functioning (over time) were reported by adolescents whose perceptions of their middle schools included: schools that were non-competitive; utilized meaningful curriculum; and employed caring teachers (Roeser et al., 2000).

Figure 3

Theoretical Framework: Lives in School Contexts



Note. From "School as a context of early adolescents' academic and social-emotional development: A summary of research findings", by Roeser et al., 2000, *The Elementary School Journal, 100*(5), p. 448. Permission granted for use, see Appendix B.

The *Lives in School Context* theoretical model as applied towards students in ALPs, encompasses several major researchers and theorists as shown in Table 1. When applying the theoretical framework to this research study's focus on students' psychosocial adjustment and accelerated learning programs, it assists in understanding relationships amongst the factors and

variables, and their interactions with the dependent variable, psychosocial adjustment. Identifying these relationships is important, as adolescents' school satisfaction is determined by their academic

Table 1

Researcher and Theorist Contributions

Researcher or Theorist	Theory and its Relationship to the *Lives in School Context* Theoretical Framework Model: Psychosocial Adjustment (Ego) Domain
Eccles et al. (1983)	Team of researchers who created an expectancy-value model of achievement motivation (based upon Expectancy Value Theory [EVT]) represented by adolescents' ability beliefs and subjective task values or motivation to learn as a psychological indicator of school functioning in the Psychosocial Adjustment (Ego) model
Erikson	Life span development theorist that included eight stages of psychosocial development of the ego with the fifth stage, Identity versus Identity Confusion stage, occurring during adolescence. Searching for identity or one's purpose in life can be interrupted and lead to identity confusion by an overabundance of negative life experiences during, and prior to, this stage of the ego development. Psychosocial indicators of emotional distress and life satisfaction through report adolescents' perceptions of their psychosocial functioning as evaluated during this developmental stage.
Roesser et al. (2000)	Applying Erikson's life span developmental theory and expectancy-value theory to adolescents' perceptions of their middle school education including teacher, peer and staff relationships, they created the *Lives in School Contexts* theoretical framework model. This model includes both the psychosocial adjustment domain, (psychosocial functioning and school functioning), that correlates with Erikson's ego development, and the school social context domain, corresponding to Erikson's social ethos and how their relationship between each other.
Suldo	Researcher who has been a pioneer in the study of psychosocial adjustment and coping strategies of students' that are enrolled in International Baccalaureate® and Advanced Placement® programs
Shaunessy-Dedrick	Researcher, who in conjunction with Suldo, has researched the relationship between students enrolled in accelerated learning programs and their psychosocial adjustment and coping strategies.

achievement and feelings of well-being with peer and teacher relationships (Proctor, Linley, & Maltby, 2009; Trautwein et al., 2012). Positive self-esteem and school satisfaction are essential to the well-being of students and related to academic success (Kaplan, Lui, & Kaplan, 2005; Robertson, 2013; Roeser et al., 2000). Motivation to learn as depicted in the expectancy-value model is an element of the *Lives in School Contexts* model as a psychological indicator of school functioning and is an essential component to the study's research question. Expectancy-value factors and achievement results can be partially mediated by achievement goals (Plante, O'Keefe, & Théorêt, 2013).

> Expectancies and values are assumed to influence directly achievement choices. They also affect performance, effort, and persistence. Expectancies and values are assumed to be influenced by task-specific beliefs such as ability beliefs, the perceived difficulty of different tasks, and individuals' goals, self-schema, and affective memories… (Wigfield & Eccles, 2000, p. 69)

If children believe that they are able to succeed in a task then they are more apt to be proficient; if they perceive the task as too difficult or de-value the task, then mastery is less apt to be achieved (Guo, Parker, Marsh, & Morin, 2015; Xiang et al., 2004). Young children as early as first grade, through high school students were able to: 1) differentiate between their own beliefs and values and 2) have different ability beliefs for specific achievement areas such as math, reading, music, etc. (Wigfield & Eccles, 2000). Thus, the value one places on a task and the expectations of success one believes she or he can accomplish may determine the choices a person, child or adult, makes in academic, social, occupational, or other areas of their lives (Eccles, 2009). Academic motivation and valuing school can explain why adolescents with emotional distresses continue to perform well academically (Roeser et al., 2000).

Expectancy-value theory theorizes that gender roles can influence girls and boys, women and men, in different ways (Eccles, 2009). Gender can influence individuals to have different values based upon traditional gender activities such as women being caregivers to children while their husbands build careers and men striving towards success in their chosen occupation to support the family (Eccles, 2009). The subjective task values of individuals could also be influenced by gender roles through social, family, and educational norms and the stereotypical gender role perceptions of parents and educators (Eccles, 2009). In gender-stereotyped subjects like math and physical education, girls' expectancy-related beliefs and values of the subjects have been shown to be lower than boys (Gaspard et al., 2015; Xiang et al., 2004). In comparison to boys, girls perceive math as being less important, less useful, or less interesting to them (Eccles, 2009) but valued it as important in the context of school (Gaspard et al., 2015).

Longitudinal studies showed declines in ability-related beliefs in specific subjects, ("math, reading, instrumental music, and sports"), with the largest decline between junior and high school (Wigfield & Eccles, 2000, p. 76). Subjective values also decreased with interest in reading and instrumental and the importance of English and math with declines varying between activities (Wigfield & Eccles, 2000). Explanations for these declines have been suggested by other research. In 1989, Stipek & Mack Iver concluded that children, as they age, become more accurate of their self-assessments, so their beliefs become more negative (Wigfield & Eccles, 2000). In 1996, Stipek and Wigfield, Eccles, & Pintrich deduced that the decline is due to the change in school environment and the importance of tests and competition decreases students' beliefs (Wigfield & Eccles, 2000). Further results showed that children's and adolescents' beliefs and attitudes predicted performance and choice (Trautwein et al., 2012; Wigfield & Eccles, 2000). When they believe that they can be successful, these beliefs positively correlate with

subsequent grades that show mastery, regardless if their interest has declined (Trautwein et al., 2012; Wigfield & Eccles, 2000).

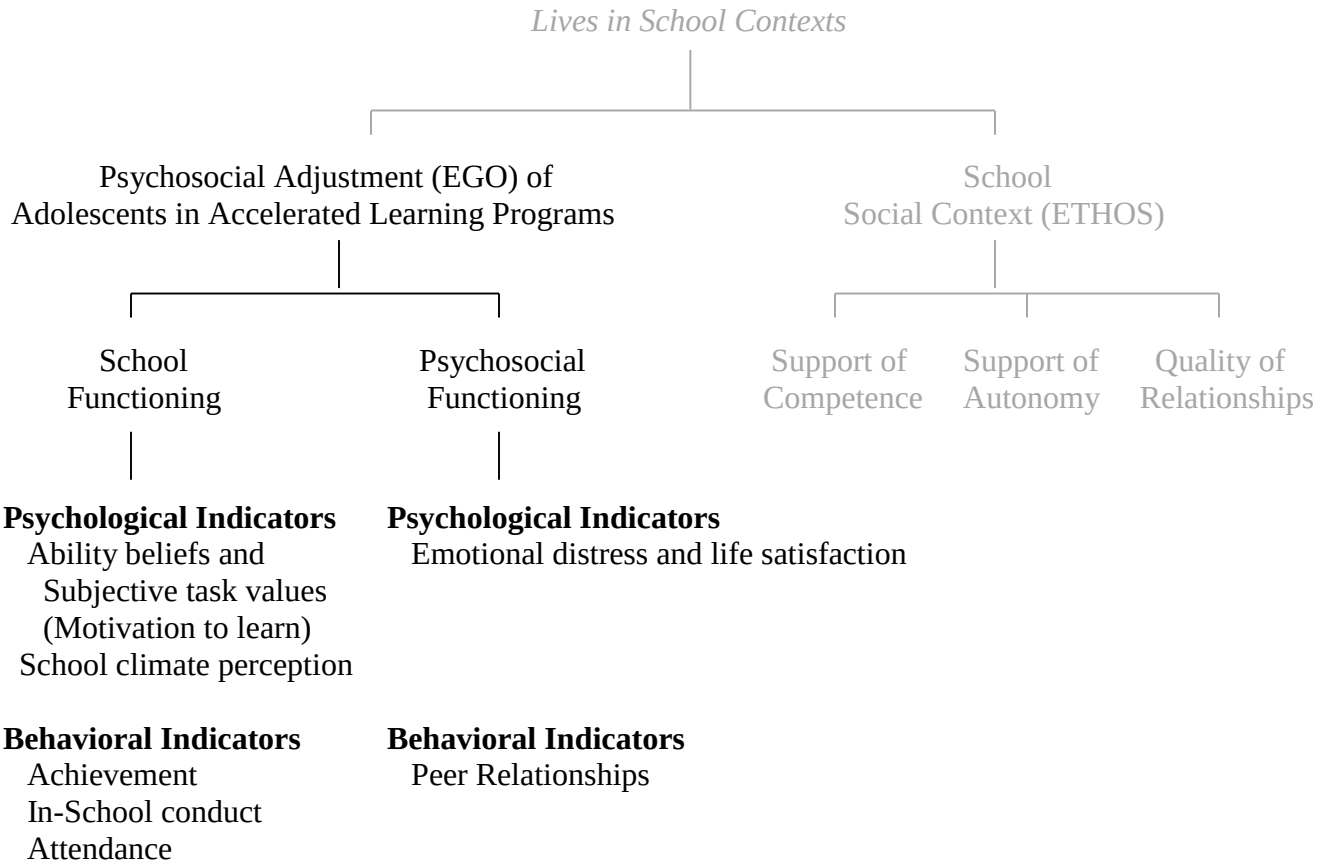
Additional theories of motivation are also pertinent to this study. Achievement motivation theory conjectures that people make choices and persist in achieving goals because of their beliefs about their success with the activity and the amount of value in the activity (Wigfield & Eccles, 2000). Achievement goal theory posits that people illustrate competence and set goals that effect their academic choices and behaviors (Xiang et al., 2004). Mastery (developing competence through learning) and performance goals (demonstration of mastery by surpassing the norm) are components of this theory (Xiang et al., 2004). Together, these theories with expectancy-value theory, surmise that educators need to match the challenge of the tasks with the abilities of the students, assist students in seeing the long-term benefit and value of completing assigned tasks, and allow choices in task selection to increase the value and interest of the task (Clinkenbeard, 2012).

In conclusion, this study melds the research of prominent researchers in the study of advanced learning students (Suldo, Shaunessy-Dedrick, etc.) and the *Lives in School Context* model (Roeser et al., 2000) that is based in Eriksonian theory of development and the EVT model of achievement by Eccles et al., (1983). Depicted in Figure 4, Erikson's ego development is represented by the psychosocial adjustment of adolescents enrolled in accelerated learning programs. Ego development is influenced by both positive and negative experiences in stages of development (Hamachek, 1988) and thus, dysfunction may occur when the ego's development is laden with negative experiences. By adolescence, as teenagers are searching for identity, an over-abundance of negative experiences may impede ego development (Hamachek, 1988). Academic stress is one of the largest stressors to adolescents and middle school and high school students

enrolled in ALP programs have additional stressors compared to general education students (Shaunessy-Dedrick et al., 2014; Suldo, Shaunessy, & Hardesty, 2008). The effects of rigorous studies on the psychosocial adjustment of middle school and high school students is still emerging (Shaunessy et al., 2006; Shaunessy-Dedrick et al., 2014).

Figure 4

Psychosocial Adjustment (EGO) of ALP Adolescents



Notes. The psychosocial adjustment of ALP adolescents model is based upon Roeser et al.'s (2009) model, *Schools in Lives Context* that is based in Eriksonian theory of development and the EVT model of achievement by Eccles et al., (1983) and Suldo and Shaunessy-Dedrick's (2013) use of life satisfaction as an indicator of adolescents' well-being.

The Description of Accelerated Learning Programs

Accelerated learning programs in schools have expanded beyond high achieving students in private schools and schools that are well-funded, to include students with diverse backgrounds and socio-economic statuses (Giani et al., 2014; Hoffman, 2003; Shepherd, 2008). Accelerated learning programs assist low income students in affordable options and can also assist students to be ready for the work force faster than their non-dual enrolled peers (An, 2013; Hoffman et al., 2009). In addition, education reform targeting the need for more challenging high school courses and the need to close the gap between high school graduation and graduates not continuing to post-secondary education has spurred high schools to offer accelerated learning programs (Giani et al., 2014; Young et al., 2013).

Dual credit programs allow students to earn college credit in high school by offering classes that have college level curriculum taught by high school teachers or college professors (Giani et al., 2014; Hoffman, 2003; Speroni, 2011). Stevenson et al. (2012) analyzed dual credit program results in New Mexico. Their purpose was to review the dual credit programs' cost effectiveness and student outcomes. Stevenson et al. (2012) outcomes illustrated higher student performance for students who participated in dual credit programs. When participating in at least one dual credit course, student graduation rates increased nearly 20%; needed less remedial classes upon entering college; and had higher persistence rates in college. At the University of New Mexico, dual credit students had a higher graduation rate (49.3%) compared to non-dual credit peers (44.5%). They also completed college faster by at least one semester at the bachelor's level and 2.3 years faster when enrolled in an Associate's program. To achieve a bachelor's degree, New Mexico's dual credit program saved families $4,356. The study also predicted that "students who take a dual credit course are projected, on average, to earn about

$200,000 more in their lifetimes than their peers" (Stevenson et al., 2012, p. 34). While dual credit programs can spur high school students towards post-secondary education, the attributes of dual credit programs such as subject areas offered, quality of instruction, and difficulty level may influence students' success (Speroni, 2011).

To be successful in the global economy, schools need to be increasing academic rigor, more flexible and intuitive to student needs, inspire students, and improve communication between schools and colleges (Stevenson et al, 2012). According to the U.S. Department of Education Office of Civil Rights (2014) there is limited access to higher level math and science classes in high schools. Eighty-one percent of high schools offer Algebra II, considered an entry level college course (Cavanagh, Schiller, & Riegle-Crumb, 2006). Only 50% of schools offered the higher level calculus class. Seventy-five percent of high schools offered chemistry and 61% offered physics. To fill the gap of limited accelerated learning courses offered by high schools, online learning can be a resource for providing accelerated learning courses otherwise not available to students.

Online course learning has changed education in the twenty-first century. It allows students that are in schools that do not offer higher level classes or who have scheduling conflicts to access rigorous academics (Shepherd, 2008). Research has shown the benefits of online learning to include students having control over their learning, time management and having an organized online environment where the resources, (tests, assignments, grades, etc.), are in one area (Shepherd, 2008). Disadvantages include the necessity for the student to be self-motivated and not procrastinate, lack of face-to-face interactions, and the ease of falling behind in studies (Shepherd, 2008). Online student discussion groups allow students the ability to engage in higher level thinking and reflection and to collaborate with others who have various learning and

thinking styles (Shepherd, 2008). While further research is needed to determine the effectiveness of online learning compared to classroom learning, the Advanced Placement (AP®) program has been successful in students going to college and success in graduating from college (Shepherd, 2008).

The AP® program has extended its programs to online learning as a method of reaching more students who may otherwise not be able to participate (Shepherd, 2008). AP® was created in 1956 to provide challenging curriculum and college credit to students in high school (Suldo & Shaunessy-Dedrick, 2013a). While the program has reached over half of all high schools in the Unites States, most schools only offer a few of the thirty-three AP® courses available (Shepherd, 2008). However, students taking Advanced Placement courses during high school have been shown to be more successful in college and online learning has afforded more students the opportunity to access AP® courses and dual credit classes (Shepherd, 2008)

A majority of the research studies reviewed included students in the IB® program. The IB® program was developed in 1968 to create a challenging high school curriculum for American students world-wide that would prepare them for college entrance (Suldo, Shaunessy, Michalowski, & Shaffer, 2008). It is designed for highly motivated students, aged 16 to 19, gifted or not. Students in IB® programs have to weigh their priorities. Students that desire to be involved in sports and extra-curricular activities may find it difficult to be in an IB® program due to the work load (Suldo, Shaunessy, Michalowski, et al., 2008). The argument has then been made whether or not the IB® program is over stressing students with too much work and little time to not only do well in their studies, but to participate in other activities (Suldo, Shaunessy, Michalowski, et al., 2008).

While accelerated learning programs are designed to support students in earning college credit during high school (Giani et al., 2014; Hoffman, 2003; Venezia & Jaeger, 2013), they also assist students in accelerating their studies through middle and high school at individualized paces. This increases student motivation and decreases school drop-outs by disillusioned high achieving youth (An, 2015; Richardson, 2007). When compared to their peers, students participating in accelerated learning programs are continuing in college after the first semester; continue to be enrolled two years after high school; and have higher grade point averages (GPAs) (An, 2015), and higher post-secondary graduation rates than their non-dual enrolled peers (Giani et al., 2014; Hoffman et al., 2009; Hughes et al., 2012; Puyear et al., 2001; Speroni, 2011).

Stress and its Effects on Adolescents

"Stress is a state of thinking, feeling, and acting in response to a trigger vent…Individuals respond to these stressors by drawing on cognitive, emotional, and behavioral skills" (Shaunessy & Suldo, 2010, p. 129). Stress has been isolated from other psychosocial functioning factors as it can be a precursor to mental health disorders such as depression, anxiety and suicidal ideation (Evans et al., 2015; Portes et al., 2002; Seiffge-Krenke, Aunola, & Nurmi, 2009). For instance, Stuart's (2006) study deduced that school work, parents and peer pressure are the top stressors in adolescence, with school work as the highest cause of stress reported by nearly 50% of the sample. Others found that school related stress can negatively impact school achievement (Arsenio & Loria, 2014; Kaplan et al., 2005; Roeser, Strobel, & Quihuis, 2002); whereas, peer alienation can cause stress in friendships (Persike & Seiffge-Krenke, 2012). High levels of stress are also directly correlated with increased reports of substance abuse that can lead into continued abuse in adulthood (Roeser et al., 2000; Stuart, 2006).

Pressures of achievement, more difficult curriculum, worrying about the future, and disengagement of teachers all produce stressful situations to adolescents (Persike & Seifge-Krenke, 2012; Stuart, 2006). Kaplan et al. (2005) conducted a longitudinal study of school-related stress in early adolescents and their academic performance three years later. The outcome of the study determined that students, who have high levels of perceived of stress in school environments, may have lower academic performance when engaging in increased academic expectations (Kaplan et al., 2005). The study also determined that negative effects of high academic expectations can be diminished through family and educational support, learning academic strategies and through learning coping strategies (Kaplan et al., 2005). Arsenio & Loria (2014), deduced that academic stress positively correlated with negative academic affect "(anxiety, frustration, and anger) while engaged in a variety of academic tasks, among them homework, class participation, and engagement in class projects" (p. 80). While elevated levels of negative academic affect correlated with elevated levels of academic stress, higher use of primary coping styles such as problem solving were associated with lower levels of academic stress (Arsenio & Loria, 2014).

Students enrolled in accelerated learning programs are exposed to additional stressors not experienced by their adolescent peers as they navigate advanced and college-level coursework, and higher demands set upon them by teachers and parents (Suldo, Shaunnesy, & Hardesty, 2008; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013b; Shaunessy-Dedrick et al., 2014). A survey to past graduates of IB® programs was administered in 2006 to determine what effect the program had on the participants' psychological well-being and college readiness. The study's outcomes, albeit a small sample size of sixteen graduates of IB® programs, illustrated that the IB® program went in-depth in content and stimulated them intellectually (Taylor & Porath,

2006). Few students stated that they did not participate in extra-curricular activities due to the IB® program while 37.5% of past-students replied that the program was damaging to their well-being, stating that procrastination, leading to getting behind in studies magnified that negative effect (Taylor & Porath, 2006). Over two-thirds of the respondents felt career and college ready and directly correlated that readiness to being in an IB® program (Taylor & Porath, 2006).

It can be speculated that due to increased stress levels associated with accelerated learning programs, high achieving students would be vulnerable to diminished psychosocial functioning (Suldo, Shaunessy, Michalowski, et al., 2008; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013b). However, while gifted students tend to be socially disconnected from others, they appear to have higher social-emotional functioning, with fewer psychotic episodes, when compared to non-gifted peers (Suldo, Shaunessy, Michalowski, et al., 2008; Suldo & Shaunessy-Dedrick, 2013b). In Suldo and Shaunessy-Dedrick's (2013a) study of 460 high school students, the study concluded that although stress levels were reportedly higher with high achieving students compared to their general education peers, the group's psychological and academic functioning were similar to, if not higher, than the general education students. Their results indicate high achieving students, when compared to general education peers: (a) can experience stress without developing psychopathology or diminishing psychosocial functioning, (b) have more positive perceptions of school climate, and (c) have greater social functioning. These same conclusions were obtained in a separate study by Suldo and Shaunessy-Dedrick (2013b). Why accelerated students have more perceived stress without more psychosocial dysfunction then their general education peers continues to need further investigating (Suldo & Shaunessy-Dedrick, 2013a).

Adolescent Psychosocial Functioning and the Impact of Accelerated Learning Programs on High Achieving Students' Psychosocial Functioning

The literature review exposed an abundance of empirical data related to the advantages of accelerated learning and the positive correlation between it and college preparedness (Giani et al., 2014; Hoffman, 2003; Hoffman et al., 2009; Richardson, 2007; Shepherd, 2008; Stevenson et al., 2012; Suldo & Shaunessy-Dedrick, 2013a). However, gaps in research exist when examining the effects of accelerated learning on the psychosocial functioning of adolescents (Robertson, 2013; Suldo & Shaunnessy-Dedrick, 2013). When adolescents have positive self-esteem their beliefs in their ability to academically achieve is greater (Bandura et al., 2003; Robertson, 2013; Suldo et al., 2008). When they are internalizing or externalizing problems, academic achievement is reduced (Roeser et al., 2001; Stuart, 2006). Thus, determining the relationship between accelerated learning and the psychosocial adjustment of adolescents is imperative.

Psychosocial functioning can be synonymous with social-emotional functioning. It explains how one interacts within their social environment and when that interaction is distressed, internal symptoms, (anxiety, depression, withdrawal from relationships), and external symptoms, (anger, misconduct) can interrupt one's psychological well-being or satisfaction with life (Shaunessy et al., 2006; Suldo et al., 2008; Sun & Hui, 2007). In the psychosocial functioning area, this study will investigate the relationship between adolescents' participation in accelerated learning programs and how it impacts their psychosocial adjustment, including their functioning.

Outcomes from studies comparing adolescents enrolled in accelerated learning programs to general education peers portray accelerated learning students as having comparable and

advanced psychosocial functioning in relation to the general education students. The IB® students reported greater levels of positive student interpersonal relationships (Shaunessy et al., 2006; Suldo & Shaunessy-Dedrick, 2013a; Suldo & Shaunessy-Dedrick, 2013b). Shaunessy-Dedrick (2013a) study concluded that the IB® students reported greater satisfaction with their friends, had fewer delinquent friends and high levels of social support from classmates. Transitioning to high school, even though accelerated learning students had higher perceived levels of stress, their psychosocial adjustment remained intact (Suldo & Shaunessy-Dedrick, 2013b).

The relationship between rigorous academics and the psychosocial functioning of students enrolled in IB® and AP® programs is forthcoming (Suldo & Shaunessy-Dedrick, 2013b). The researchers in the limited studies caution readers in generalizing outcomes due to the limited sample size or limited geographical area of study (LoCicero & Ashby, 2000; Robertson, 2013; Shaunessy & Suldo, 2010; Shaunessy et al., 2011; Shaunessy et al., 2006; Suldo et al., 2009; Suldo & Shaunessy-Dedrick, 2013a). For the purpose of this study, the literature will be reviewed as it has the most similar student sample of this study, with the IB® and AP® programs being considered accelerated learning programs.

Psychosocial factors. Adolescence is a challenging developmental period that can produce a multitude of stressful situations leading to depression, anxiety or other psychological symptoms (Moksnes et al., 2014; Wiklund et al., 2012). Adolescents who lack positive self-esteem have more socio-emotional problems and have poor beliefs in their academic abilities (Roeser et al., 2001; Sun & Hui, 2007). They are more likely to have bad moods which hinder their learning (Roeser et al., 2001). Especially in girls, lack of self-concept can lead to an increase in depression with adolescent girls developing depression more than adolescent boys

(Derdikman-Eiron, Hjemdal, Lydersen, Bratberg, & Indredavik, 2013; Robertson, 2013; Sun & Hui, 2007). In a 2012 study by Derdikman-Eiron et al., boys who exhibited symptoms of depression or anxiety were affected in subjective well-being, self-esteem, and psychosocial functioning more robustly than girls.

Wiklund et al. (2012) concluded that there is an elevated frequency of subjective health complaints and perceived stress amongst upper secondary school adolescents. Strong correlations between perceived stress, psychological symptoms, and anxiety were found, (especially in girls), with symptoms in early adolescence being more likely to continue into later adolescence (Wiklund et al., 2012). This childhood to adolescent and adulthood relationship was also seen with sleeping difficulties and pain problems (Wiklund et al., 2012). Stressors identified in the school setting were more prevalent than family issues and can be contributed to the pressures and demands of academia (Wiklund et al., 2012).

Depression, anxiety, poor self-esteem, misconduct, conflict in peer and family relationships are factors that contribute to adolescents' poor sense of identity (Roeser et al., 2000). Erickson, with his theory of development, believed that lack of trust built during the early years of development would lead to insecurity and lack of autonomy (identity) in later stages (Hamachek, 1988; Roeser et al., 2000). If this insecurity continued throughout the next stage and the preadolescent continued to feel insecure, low self-esteem would be prevalent in future stages (Roeser et al., 2000). Thus, during preadolescence, failure to resolve these feelings or crises like family dysfunction can increase the preadolescents' risk of suicide (Roeser et al., 2000).

During the adolescent years, teenagers are questioning their identity and are experiencing more stress than in other stages as they search for this identity (Roeser et al., 2000). They are at risk for substance abuse, pregnancy, and mood disorders (Roeser et al., 2000; Stuart, 2006).

Familial discourse is one of the main stressors during this stage including lack of support from parents and alienation from the family (Stuart, 2006; Sun & Hui, 2007). Other factors adding to adolescents' stress and possible suicide ideation are drug use, social-emotional issues and unattained school goals (Portes et al., 2002; Stuart, 2006; Sun & Hui, 2007). Thus, as teenagers experience insecurities (early adolescence) and identity struggles (adolescence) their internal and external problems may increase. This affects their mental health which reduces their academic performance and may leave them vulnerable to future achievements (Roeser et al., 2001).

Perfectionism

Earlier research concluded that gifted students are perfectionists and suffer from lack of self-esteem, psychosocial issues, and are uncertain about their careers (DiPrima, Ashby, Gnilka, & Noble, 2011; LoCicero & Ashby, 2000). Beyond affecting psychological well-being, perfectionism was viewed as an attribute that negatively impacted academic achievement (Shaunessy et al., 2011). Recently, perfectionism has been seen as a spectrum with both adaptive and maladaptive features (Fletcher & Speirs Neumeister, 2012; Shaunessy et al., 2011).

Adaptive perfectionists are self-oriented individuals that set high personal standards and goals without excessive self-criticism if falling short or meeting those goals (DiPrima et al., 2011; Fletcher & Speirs Neumeister, 2012; Shaunessy et al., 2011). They utilize their sense of failure as a way to motivate themselves to do better, thus reducing the chances of poor psychosocial functioning (Nounopoulus et al., 2006). Adaptive perfectionists reported higher grade point averages then maladaptive perfectionist adolescents (Nounopoulus et al., 2006).

It is posited that adaptive perfectionism in gifted students creates adaptive coping strategies for academic achievement (Shaunessy et al., 2011). Research shows that IB® students

have higher levels of adaptive perfectionism than general education students; as well as, lower levels of maladaptive perfectionism (LoCicero & Ashby, 2000; Shaunessy et al., 2011).

Maladaptive perfectionists have high standards but when goals are not met tend to feel unworthy and a failure (DiPrima et al., 2011; Shaunessy, Suldo, & Friedrich, 2011). Maladaptive perfectionistic youth develop unrealistic standards, do not meet those standards and then lose confidence in academic skills leading to underachievement (Nounopoulus et al., 2006). It is conjectured that the longer students are in IB® programs, maladaptive perfectionism may increase (Shaunessy et al., 2011). The highest adaptive perfectionism perceptions were reported by ninth grade students; whereas, twelfth grade students reported the highest maladaptive perfectionism levels (Shaunessy et al., 2011). General education "students' mean levels of maladaptive perfectionism were constant across grade levels" (Shaunessy et al., 2011, p. 72). Additionally, IB® students with high maladaptive perfectionism reported lower life satisfaction than general education students with similar levels of maladaptive perfectionism (Shaunessy et al., 2011).

As adaptive perfectionism increased in IB® students, so did global life satisfaction (Shaunessy et al., 2011). This trend indicates that adaptive perfectionism positively correlated to higher levels of self-esteem and psychosocial factors than maladaptive perfectionism (LoCicero & Ashby, 2000; Shaunessy et al., 2011). This may be due to gifted students' maturity, creativity or drive for success (LoCicero & Ashby, 2000).

Little research has been done in determining familial relationships with perfectionistic children. However, it has been found that critical parenting, perfectionistic model parents, families stifling independence, and controlling parenting have led to maladaptive perfectionists (DiPrima et al., 2011). Maladaptive perfectionist adolescents reported substantially less familial

cohesiveness and nurturance (DiPrima et al., 2011). This may contribute to their perception that love and acceptance by parents is based upon meeting high standards causing them to "overvalue performance and undervalue himself or herself" (DiPrima et al., 2011, p. 824). Adaptive perfectionist adolescents believed their families to be cohesive, nurturing, affirming, positive, balanced, and flexible (DiPrima et al., 2011). There was a sense of unconditional love and support from parents regardless of success or failure in meeting the perfectionists' high standards. This parental support may be why adaptive perfectionist students are able to maintain boundaries in their performances and "focus on their strengths rather than their weaknesses" (DiPrima et al., 2011, p. 823).

Peer and Family relationships. When adolescents fail to make positive relationships with peers or family members, feelings of worthlessness and hopelessness may lead to psychological problems, substance abuse or suicidal ideation (Persike & Seiffge-Krenke, 2012; Proctor et al., 2009; Stuart, 2006; Sun & Hui, 2007). Peer relationships are important to adolescence; especially to girls and early adolescents. In older adolescents, peer conflict is an indicator of depression (Sun & Hui, 2007). Lack of relationships can increase delinquent behavior in girls and employment problems with boys leading to suicidal ideation. Adolescents that feel alienated from parents or family are apt to develop low self-esteem contributing to subsequent suicidal ideation (Sun & Hui, 2007; Portes et al., 2002).

The outcome of Sun & Hui's 2007 study illustrated that family cohesiveness had a significant positive effect on adolescents' self-esteem. It concluded that adolescents who do not have a strong sense of school or family connectedness tend to develop low self-esteem that turns into depression, leading to suicidal ideation. Older students had significantly lower levels of self-esteem, teacher support and sense of school connectedness and significantly eleveated levels of

family dysfunction compared to younger adolescents. Self-esteem and depression had a strong correlation in suicidal ideation amid girls and younger adolescents, supporting previous studies (Suldo & Shaunessy-Dedrick, 2013a; Sun & Hui, 2007).

Life satisfaction. The final indicators of psychosocial functioning this study will examine are life satisfaction (LS); also known as perceived quality of life (PQQL) (Huebner et al., 2004). "Positive Psychology" focuses on identifying one's strengths and then developing those strengths as barriers against decreased psychosocial functioning (Huebner et al., 2004; Proctor et al., 2009). Life satisfaction is a theory of "Positive Psychology" and it encompasses both psychopathology and subject well-being (SWB) (Long et al., 2012; Proctor et al., 2009). Life satisfaction has been positively correlated to self-esteem and sociability (Huebner et al, 2004; Proctor et al., 2009). Studies have shown that LS can act as a mediating factor between stressful events in one's life and psychopathology behaviors (Proctor et al., 2009; Suldo, Shaffer, & Riley, 2008).

In 2004, Huebner et al. examined various correlations between perceived quality of life (PQQL) and specific factors. Perceived quality of life was found to be positively associated with "self-esteem, internal locus of control, and extraversion" (Huebner et al., 2004, p. 83); as well as, strong family relationships that include love, support, marital happiness and firm parenting. Attempting challenging and meaningful tasks and participating in extracurricular activities were also positively correlated with PQQL (Huebner et al., 2004). Lower PQQL can be associated with: pregnant teens, substance users, exhibiting violent behaviors, negative attitudes towards school and others, negative life events, mother-adolescent arguments, anxiety and neuroticism (Hueber et al., 2004). Further research was suggested for additional factors such as school and home environments, life events, family, and mental health.

In 2009, Suldo et al. developed a model to explain the influences of behavioral contexts (academic performance) and social contexts (school climate and satisfaction) upon cognitive contexts (student beliefs) which then determines life satisfaction. They uphold that students' life satisfaction is mostly affected by "(1) their ability and motivation to achieve academically in general (personal academic beliefs) and (2) their attitudes toward their current school (attachment to school)" (Suldo et al., 2009, p. 57). Both IB® and general education students were included in the research study.

Several relationships were concluded from Suldo et al.'s 2009 study. School climate variables of student-teacher relationships and parental involvement in school distinctively influenced life satisfaction (Suldo et al., 2009). All of the academic factors hypothesized to affect global life satisfaction did with life satisfaction relating to "school satisfaction, attachment to school, personal academic beliefs, and school climate" (Suldo et al., 2009, p. 62). The study also supported the theoretical model of behavioral, social and cognitive contexts all being related to global life satisfaction through student's satisfaction with school (Suldo et al., 2009). In addition, grade point averages were positively correlated with school attachment and students' academic beliefs, the factor that had the largest positive correlation with life satisfaction (Suldo et al., 2009).

Summary. Adolescents experience many changes during this developmental period of their lives (Bandura et al., 2003; Klimstra et al., 2012; Moulds, 2003; Roeser et al., 2001; Suldo et al., 2009). How they manage these events in their lives will influence how they will do in school, their self-esteem, peer relationships and future endeavors (Roeser et al., 2000). Strong relationships in school, with peers, and family can lead to positive development during adolescence (Sun & Hui, 2007). In Roeser et al.,'s (2000) study of 1, 480 adolescents, those

with multiple psychosocial and behavioral risk factors were actually a minority group (1/3 of study sample). Forty percent of the sample groups were comprised of adolescents who had good mental health, high academic achievers and did not associate with students who had negative behaviors. The study showed that students who feel capable with their school functioning and value school can overcome other life stressors that might inhibit their academic success. When adolescents feel that they have some control over their learning, cared about and that teachers are developing their academic and social capabilities, then their psychosocial and school functioning will be enhanced (Roeser et al., 2000).

Adolescent School Functioning and the Impact of Accelerated Learning Programs on High Achieving Students' School Functioning

School functioning implies how adolescents integrate and succeed within educational settings. It not only includes students' grade point averages (GPA), test scores, academic motivational beliefs, and in-school behavior; it can also include students' awareness of their school and school climate satisfaction (Suldo & Shaunessy-Dedrick, 2013a). Shaunessy et al.'s (2006) study identified academic functioning in three areas, "academic motivational beliefs, academic achievement, and in-school conduct" (p. 77). For the purpose of this study, Suldo and Shaunessy-Dedrick's (2013a) definition of school functioning, in addition to Shaunessy et al.'s (2006) areas will be combined to study a multi-variable approach of students participating in accelerated learning programs.

Academic motivational beliefs. Positive academic motivational belief can be a strong indicator of success in high school and in accelerated learning programs. Roeser et al. (2002) studied how early adolescents' academic and behavioral engagement in the classroom was correlated with their academic motivation beliefs and social-emotional functioning using two

conceptual approaches. The Dweck approach integrated educational and mental health issues examining the relationship between constructs like self-beliefs, goals and motivation through three types: “mastery-oriented students, ego-oriented students, and helpless students” (Roeser et al., 2002, p. 348). Students’ mindsets were either fixed (unable to change) or malleable (with effort, their mindset will grow) (Clinkenbeard, 2012). The Roeser et al. (2002) approach grouped preadolescents “based on their similarity across three psychological process variables: their perceived academic competence, their valuing of learning and school, and their feelings of emotional distress” (p. 349).

The outcomes of Roeser et al.’s (2002) study found a variety of relationships between academic motivation and performance and social-emotional functioning and behavior in the middle school classroom. Students who valued learning, set goals and mastered curriculum were less likely to misbehave in the classroom by using self-regulation strategies (Roeser et al., 2002). Those who believed their intelligence was fixed, were “ego-avoidance” or academically helpless, were more distracted and would avoid activities in the classroom (Roeser et al., 2002). Academically helpless students reported more disruption in the classroom, refusal of work and skipping class (Roeser et al., 2002). Dweck’s mastery-oriented students and Roeser et al.’s multiple strengths students both reported positive self-esteem, low emotional distress and highly valued the academic curriculum (Roeser et al., 2002).

Another theory described as the self-system model describes engagement as consisting of behavioral, emotional and cognitive elements of students’ actions in the learning environment (Wang & Peck, 2013). Just as in the theoretical framework of Wigfield and Eccles’ expectancy-value model (1992), school engagement decreases as students progress towards high school

graduation in the self-system model (Wigfield & Eccles, 2000) with seventy percent of freshman students dropping out of school by twelfth grade (Wang & Peck, 2013).

In Wang & Peck's (2013) study, the students were identified by the groups: "highly engaged…, moderately engaged…, minimally engaged…, cognitively disengaged…, and emotionally disengaged" (p. 1270). The emotionally disengaged group was at highest risk of psychopathological problems and not enrolling in college as frequently as the other groups (Wang & Peck, 2013). The cognitively disengaged students who were emotionally and behaviorally engaged at school had better mental health than the emotionally disengaged students (Wang & Peck, 2013). This cognitively disengaged group was at risk of not being discovered to have academic issues because they are not exhibiting emotional or behavioral problems in the school setting which could then lead to school disengagement and eventual school drop-out (Wang & Peck, 2013). However, the minimally engaged student group was at the highest risk of dropping out of school (Wang & Peck, 2013). The importance of school engagement was seen by the highly engaged group where they had "the highest academic achievement, educational aspirations, and college enrollment rates, and they had the lowest depression and dropout rates…" (Wang & Peck, 2032, p. 1273).

An additional theory of academic motivation is the Model of Academic Engagement and Achievement (Roeser et al., 2001). This model represents the belief that adolescents' academic motivation and achievement is related to childhood experiences. The children's socioeconomic status and the neighborhood social experience they had combine with their personalities to develop academic motivational beliefs. Thus, adolescents' belief systems including their psychosocial functioning and school functioning are developed throughout the experiences of childhood. (Roeser et al., 2001).

Motivation and gifted students. Goal orientation can be divided into mastery, performance, approach, and avoidance categories (Little, 2012). Previous research shows mastery goal orientation (engaging in tasks to grow and learn from them or the growth one will experience by engaging in the task) more advantageous than performance goal orientation (engaging in tasks for the recognition one will receive). Without challenge in curriculum, gifted students may not be able to grow to the level of mastery goal orientation (Little, 2012).

Curriculum challenge is required for all learners, gifted and not. However, with gifted students, many stakeholders report that gifted students in school are not being provided the challenges needed for appropriate growth as the majority of the curriculum is targeted towards "typical" learners (Little, 2012). Gifted students reported too slow of pace, too much repetition, lack of critical thinking and the ability to not pursue personal interests (Little, 2012). Thus, challenging curriculum for gifted learners includes an accelerated teaching pace, limited repetition of already mastered material, more intricacy and greater profundity into content accompanied by an environment supportive to engage students with the curriculum material (Little, 2012).

Boredom also needs to be considered as a reason gifted learners do not excel in a school setting (Little, 2012). Students with self-focused boredom, such as frustration with one's self, tend to lead to greater psychological risks than those who experience task-focused boredom, or those who see tasks as meaningless (Little, 2012). To prevent boredom, curriculum needs challenge, creativity and involve abstract thinking (Clinkenbeard, 2012; Little, 2012). Students need to envision tasks as worthwhile to learning and need to value them (Little, 2012). Meaningful curriculum makes connections to students' lives and experiences as this motivates them to gain further knowledge and can promote greater performance (Little, 2012). Instructional

strategies need to be engaging, assessment strategies useful in demonstrating learning, and "promote the potential intrinsic value of the tasks" (Little, 2012, p. 700

School climate. Satisfaction with school climate (school satisfaction) can be related to how an adolescent feels about his or her well-being in regards to academic satisfaction and peer and teacher relationships (Robertson, 2013; Trautwein et al., 2012; Wang & Eccles, 2013). Students' views on school climate are important as their views shape their beliefs and positive school climates positively correlate with academic achievement and motivation (Loukas & Robinson, 2004). Students who lacked in positive self-concept but perceived a good school climate were less likely to have elevated problems (Loukas & Robinson, 2004).

Teacher-student relationships and students' feeling of belongingness have impacted academic achievement, motivation and students' socio-emotional well-being (De Wit et al., 2011; Eccles & Roeser, 2011). Stage-environment fit theorists conclude that adolescents' decrease in feelings of social support can be attributed to "a widening lack of fit between the changing developmental needs of adolescents and the social and learning environment of middle and high schools" (De Wit et al., 2011, p. 557). Teacher expectations and how they treat different ethnicities and gendered students can have negative effects on student motivation and achievement (Eccles & Roeser, 2011; Fan et al., 2011). When a classroom is more supportive, classroom engagement, and students' motivation and socio-emotional well-being rises (Eccles & Roeser, 2011). Research in the correlation between school social support and psychosocial well-being of adolescents is limited (De Wit et al., 2011).

Aspirations and expectations can also be influenced by students' school climate perceptions and in order to convert academic goals into reality, students require future goals and self-controlling behaviors (Kirk et al., 2012). In Kirk et al.'s study (2012), it concluded that an

attitude towards teachers was a significant finding while an attitude towards school was not. "Thus, students who feel supported and cared for by their teachers, while being engaged by the class material, may be more likely to persist with educational goals" (Kirk et al., 2012, p. 515).

According to Eccles & Roeser (2011), three levels of school involvement emerge. At the first level of "teachers, tasks, and classroom environments", (Eccles & Roeser, 2011, p. 225), influences upon adolescents can be monumental. Curriculum content and subject interest to engage adolescents are imperative to school bonding and motivation (Eccles & Roeser, 2011). A high interest level is positively correlated with higher engagement and mastery and increases the possibility of students' commitment to school (Eccles & Roeser, 2011). Developmentally, middle school students report the greatest boredom with passive schoolwork and in particular courses like social studies, mathematics and science. (Eccles & Roeser, 2011). Challenging course work can mediate boredom effects and increase meaningfulness and students' school belongingness beliefs.

Level two and level three school involvement include school-wide and district-wide culture and policies (Eccles & Roeser, 2011). Studies have shown that students' concern over school safety and levels of violence decrease as the school climate improves (Eccles & Roeser, 2011). Students taking the same classes together tend to have the strongest influence on peers' individual identities, goals and academic choices. Thus, associating with students who are academically achievement oriented will decrease students' likelihood of engaging in risky behaviors and increase positive academic achievement (Eccles & Roeser, 2011).

With school wide culture, various individual-level variables had significant relationships with students' school climate perceptions. Boys and students with conduct issues believed school rules were unfair and teacher-student relationships less supportive (Fan et al., 2011). Also,

ethnicities perceived school-wide culture differently. “African American students were more favorable toward the fairness and clarity of school rules” while “Hispanic and Asian students reported less favorable perceptions of school order, safety, and discipline” (Fan et al., 2011, p. 643). Parents’ and siblings’ level of education and students’ with conduct issues also were also strong predictors of students’ perceptions of school order, safety, and discipline (Fan et al., 2011).

In addition to the levels of school involvement, school size and transitional periods can affect school climate. Transitions between elementary to middle school and middle to high school have been shown to be difficult periods for adolescents where motivation, achievement and engagement in school decline (Eccles & Roeser, 2011). This can be due to the developmental periods experienced by students during this time, the larger school environments typically seen at the middle and high school levels, and/or the perception of loss in the teacher-student relationship as class size increases (Eccles & Roeser, 2011). However, instead of the size of school, the quality of school climate and quality of teacher instruction seems to be a higher correlation to students’ achievement (Eccles & Roeser, 2011).

Academic achievement. Transitioning to high school can be a difficult time for adolescents. For adolescents who begin high school in remedial or lower level classes, their chances of success is less than high achieving students (Cavanagh et al., 2006). Cavanagh et al. (2006) reported that course levels, grades and scores on tests in students’ first year of high school determine success in subsequent years in advanced level courses and exams. Students beginning high school in lower level courses and achieving lower grades have less time and few chances to excel by graduation.

Academically, high achieving students in accelerated learning programs are outperforming their general education peers. Shaunessy et al.'s (2006) study of IB® students and general education students concluded that IB® students were more confident in their school abilities and their learning behaviors. They achieved higher grades and associated with peers who supported them. IB® students also reported higher perceptions of school climate, including relationships between students, and students and teachers. Hoyt and Sorensen (2001) revealed that 66% of students who mastered 12th grade English and who completed AP® classes in English did not require remedial classes at college. Furthermore, adolescents in dual credit programs have higher high school graduation rates, are less likely to need remedial college classes and are better prepared for college (An, 2015). They are also twice as likely to graduate from college compared to non-dual credit students (Stevenson et al., 2012; Young et al., 2013).

Other factors of school functioning. Family-structure history is a factor that can negatively impact school functioning. Cavanagh et al.'s (2006) study concluded that ninth grade students raised in dysfunctional families significantly reduced their ability to complete Algebra I. Students who complete Algebra I in 9th grade are more likely to graduate from high school with at least progressing through Algebra II. Students, who were unsuccessful in passing Algebra II during high school, reported higher levels of psychological distress, were more likely to drop out of high school, and were less interested in attending college. Thus, unstable family-structure affected both beginning and ending high school academic success. In addition, students who were born into a single parent family were twenty-five percent less likely to pass Algebra I in ninth grade than those students born into two parent homes. Children living in alternative homes (single parent, step-parent) have more school problems than those children in two-biological parent homes. Students born into unstable homes, have higher chance of dropping out of high

school, score lower on standardized testing and achieve lower grades. This demonstrates that family-structure history has a long-lasting effect on the academic success of children.

Mother-child relationships also show a significant correlation to academic expectations (Sanders et al., 2001). A mother's expectations influence adolescent's academic expectations (Sanders et al., 2001). While no differences were found between mother and father expectations with senior students, the mother-adolescent influence is present during eighth grade (Sanders et al., 2000). One suggestion is that this motherly influence is due to the amount of time being spent with a mother figure instead of the father figure (Sanders et al., 2001).

Substance use is another factor that can affect school functioning. Poor grades can lead to lower self-esteem that can then lead to substance use. Elevated use of substances can cause students to have lower academic motivation, damaged cognitive ability and low academic success (Cox, Zhang, Johnson, & Bender, 2007; Proctor et al., 2009; Sanders et al., 2001). Cox et al.'s (2007) study concluded that of all substance users and non-users, frequent smokers had achieved lower grades (2.5 times more likely). Users of marijuana were more than twice likely to achieve lower grades compared to non-users (Cox, 2007; Sanders et al., 2001).

Coping Strategies Associated with Students, Including High Achieving Students

How one interacts with situations over their lifespan defines coping from a developmental viewpoint (Seiffge-Krenke et al., 2009). Why do some adolescents transition through this stage of life without life-long effects (Roeser et al., 2000)? This study's last research question will examine the coping strategies of students that are participating in accelerated learning programs.

Coping is also described as mechanisms that are in place, prior to a stressful situation, that mitigate the effects of stress (Nounopoulos et al., 2006; Seiffge-Krenke et al., 2009).

Seiffge-Krenke (2009) studied a multidimensional model of coping. Three coping styles were identified. Active coping strategies include support-seeking behaviors including discussing problems with others including peers, family, school personnel, professionals, and others. Internal coping "encompasses cognitive ways of dealing with stressors, such as considering possible solutions and anticipating results…withdrawal coping, consists of withdrawing from the stressor, distraction strategies, and seeking emotional outlets" (p. 261).

Previous studies had shown that active and internal coping styles were used most frequently when dealing with daily stressors (Seiffge-Krenke et al., 2009). When adolescents perceived situations level in power (ie., with friends or in the school context versus with parents where parents exerted more power), they were apt to utilize active coping styles. When they felt threatened or perceived lack of control, they tended to withdraw (Seiffge-Krenke et al., 2009). Withdrawal coping strategies may not always be related to positive outcomes and have been related to psychopathology (Persike & Seiffge-Krenke, 2012).

The study concluded that "although the levels of perceived stress and coping varied between individuals, the situational impact was a powerful determinant of stress perceptions and all three coping skills" (Seiffge-Krenke et al., 2009, p. 273). The research illustrated that adolescents' stress levels diminished during late adolescence. Stress was reported highest in parent relations and lowest in regards to self and the future (Seiffge-Krenke et al., 2009). Girls reported increased stress with peers than boys who reported increased stress in intimate relationships than did girls (Seiffge-Krenke et al., 2009). During perceived stressful situations, adolescents' stress levels increased and were high up to the age of 15; at which time, perceived stress levels deceased in the same situations into later adolescence (Seiffge-Krenke et al., 2009).

Adolescents used active and internal coping skills more than withdrawal; however, withdrawal coping was highest in early adolescence (Seiffge-Krenke et al., 2009). In perceived highly stressful situations, active coping was used the most (Seiffge-Krenke et al., 2009). When active coping was used in early adolescence, when the same situation appeared later, adolescents' perceived stress levels were lower (Seiffge-Krenke et al., 2009). Thus, active coping is a highly proficient way to solve conflicts or stressful situations in adolescence (Seiffge-Krenke et al., 2009) and can be a useful mechanism for students enrolled in accelerated learning programs.

How adolescents cope with academic stress has been found to relate to their emotional state "as well as to their academic performance and level of academic stress" (Arsenio & Loria, 2014, p. 87). Disengaged coping, consisting of distraction and denial, led to reports of elevated levels of academic stress, higher negative academic affect, and lower grade point averages (GPA) (Arsenio & Loria, 2014). Students who had higher GPAs were less likely to engage in disengaged coping and reported less negative academic affect (Arsenio & Loria, 2014).

Sung, Puskar, and Sereika (2006) studied coping strategies and psychosocial factors of rural adolescents in a rural farming community in southwestern Pennsylvania. The outcomes of the study did not report any significant differences in coping strategies between the sample population and their peers. The results support earlier studies in gender comparisons. As reported in other studies (De Wit et al., 2011; Roeser et al., 2001), girls reported depression (Derdikman-Eiron et al., 2013) and anxiety significantly higher than boys and boys reported higher levels of self-esteem. In addition, boys sought guidance for coping strategies less than girls (Roeser et al., 2001). Of significance, students who felt symptoms of anxiety or depression used coping

strategies in both the positive approach and avoidance coping strategies categories. In addition, anger variables were significantly related to the avoidance category (Sung et al., 2006).

Since excessive stress is related to lower social-emotional well-being in adolescents, identifying coping strategies being used by IB® students, (or students in general), is important to their psychosocial functioning. While gifted students tend to be socially disconnected from others, they appear to have higher social-emotional functioning, with fewer psychotic episodes, when compared to non-gifted peers (Suldo, Shaunessy, Michalowski, et al., 2008). Suldo, Shaunessy, Michalowski, et al.'s (2008) study comprised of two sample groups divided into "low anxiety" and "high anxiety". The study concluded that IB® students employ several coping strategies to reduce their levels of stress. Problem-solving and avoiding tasks strategies were discussed the most by the students in both sub-groups. They mostly did this through engaging in activities unrelated to the problem and through procrastination. The students in the low anxiety sub-group also endorsed relaxing and having a sense of humor as anxiety relievers. Students with higher anxiety levels tended to ask for support from friends that were not part of their academic program.

In 2014, Shaunessy-Dedrick et al., studied IB and AP® students' perceptions that led to risks and successes in the accelerated learning programs. Their results concluded that academically successful and academically struggling students perceived effective and ineffective coping strategies were utilized. Both student groups identified efficient time and task management, engaging in temporary distractions, relaxing, and seeking support from peers, educators, and parents as effective strategies. Successful students also endorsed cognitive reappraisal approaches (focusing on positive aspects of life, putting problems into perspective, and adjusting their standards of their own goals measuring success) as effective coping strategies

at a 3:1 rate of unsuccessful students (Shaunessy-Dedrick et al., 2014). Students identified inefficient time and task management, procrastination, engaging in temporary diversions, becoming upset or emotional, and avoiding seeking help from others as ineffective strategies (Shaunessy-Dedrick et al., 2014).

The minimal research conducted, (Shaunessy & Suldo, 2010; Shaunessy-Dedrick et al., 2014), in regards to coping strategies used by students in accelerated learning programs suggests that while there is a stressful environment due to the challenging curriculum and expectations, high achieving students mediate the effects of stress (Suldo et al., 2009). One deduction is that the IB® program's students' perceptions of positive school climate may have offset the effects of school-related stress. Another is that the higher socio-economic status of the sample's participants may have also been positively correlated to greater satisfaction of living conditions (Shaunessy et al., 2006). Shaunessy et al. (2014) suggested that students' coping strategies "may become personal assets that protect them from adverse outcomes in the face of challenging circumstances, which present in the form of intense academic demands for the AP and IBD populations" (p. 132).

Coping strategies used by general education and accelerated learning students in the presented research studies were similar. Avoidance and withdrawal behaviors were found to be ineffective strategies; whereas, seeking help from others, and cognitive reappraisal techniques were effective throughout the research. Table 2 depicts those similarities.

Table 2

Similarities Between Coping Strategies Used by Adolescents

Authors	Effective Coping Strategies	Ineffective Coping Strategies
Arsenio & Loria (2014)	• Primary Engagement (Active coping such as problem solving and emotional regulation-expression) • Secondary positive coping (Cognitive restructuring, positive thinking, acceptance, make a distraction)	• Disengagement coping (avoidance, denial, wishful thinking)
Seiffge-Krenke, Aunola, & Nurmi (2009)	• Active coping (support seeking) • Internal coping (positive reappraisal)	• Withdrawal coping (withdrawing from stressor, distraction, or seek emotional outlets)
Shaunessy-Dedrick & Suldo (2014)	• Efficient time and task management • Temporary diversions • Relaxation • Seeking support from family, friends, teachers, or professionals • Cognitive reappraisal	• Inefficient time and task management • Procrastination • Temporary diversions • Becoming upset or emotional • Avoid seeking help from others
Suldo, Shaunessy, & Hardesty (2008)	• Problem solving • Avoiding tasks through unrelated activities and procrastination • Relaxation • Sense of humor • Asking for support	
Sung, Puskar, & Sereika (2006)	• Logical analysis • Positive reappraisal • Seeking guidance • Problem solving	• Cognitive avoidance • Acceptance/resignation • Seek alternate rewards • Emotional discharge

Still under-researched is how coping strategies affect students enrolled in accelerated learning programs with the stress levels presented due to challenging curriculum and increased time commitments (Shaunessy-Dedrick et al., 2014). Further research is warranted to conclude that perceived stress in IB® and AP® students does not decrease students' psychosocial functioning due to increased academic engagement and higher global life satisfaction compared to their general education peers (Suldo & Shaunessy-Dedrick, 2013a).

Conclusion

Accelerated learning programs, such as dual credit, are supporting education in the 21st century (An, 2013; Hoffman et al., 2009; Shepherd, 2008; Speroni, 2011; Stevenson et al., 2012). They are creating individual pathways for students who desire more challenging curriculum; as well as generating opportunities for students to stay motivated in learning. Additional research is needed to ascertain that accelerated learning programs are not detrimental to the school functioning and psychosocial functioning of students (Robertson, 2013; Suldo & Shaunessy-Dedrick, 2013a).

This study's theoretical framework, *Lives in Context* (Roeser et al., 2000) illustrates that there is not one factor that will predict students' success. By viewing adolescent psychosocial functioning in the context of school environment, the *Lives in Context* model demonstrates that multiple factors are needed to create success or failure (Roeser et al., 2006). Additionally, Eccles et al.'s (1992) expectancy-value model adds to the theoretical framework by including students' beliefs and values as an explanation for students' success in accelerated learning programs (Wigfield & Eccles, 2000).

In conclusion, while research has accumulated about the positive effects of accelerated learning programs and success in academic achievement and college readiness, (Giani et al.,

2014; Hoffman, 2003; Hoffman et al., 2009; Puyear et al., 2001; Shepherd, 2008), limited research has been conducted about the psychosocial functioning of students in these programs. Furthermore, current research that has been conducted has been with small samples that cannot be generalized to the larger population (Robertson, 2013; Suldo, Shaunessy & Hardesty, 2008; Suldo & Shaunessy-Dedrick, 2013a). Researchers suggest future research take place with larger sample sizes using multiple schools in a variety of accelerated learning programs (Robertson, 2013; Suldo & Shaunessy-Dedrick, 2013a). This study adds to the body of research by having a student sample from middle and high schools in a northwestern state that utilize a combination of accelerated learning programs.

Throughout the literature review for this study, studies were not located to support additional research questions that this study asks. While research has studied both early adolescence and adolescence and their psychosocial adjustment, it has not delved deeper in regards to the effects of accelerated program participation on the psychosocial adjustment by age of student or grade level; or, by the number of college level classes enrolled in. Students as young as twelve are now taking accelerated classes and the effects of these programs on their psychosocial adjustment is needed to determine if there are any negative effects so that those effects can be mediated. In addition, literature reviewed did not delineate the actual number of college credits taken by the students in the samples. While IB® programs are created to provide accelerated learning in its entirety, AP® and dual credit programs are variable. This study would create research in those areas.

Chapter III

Design and Methodology

Introduction

The objective of this correlation study was to examine the relationships between high achieving adolescents' psychosocial adjustment and the relationship with grade level, number of ALP classes and gender; examine relationships between the psychosocial adjustment variables; and study the coping strategies used by accelerated learning students. Psychosocial adjustment was comprised of two components: psychosocial functioning and school functioning. Psychosocial functioning included the variables that contribute to adolescents' psychological well-being and life satisfaction. Peer relationships, internalized emotional distress (depression, anxiety), self-esteem and stress are variables of psychosocial functioning (Shaunessy et al., 2006). School functioning was categorized into academic achievement, external behavior conduct (delinquency and classroom behavior), and academic motivational beliefs. For the purpose of this study, adolescents' perception of school climate was included in the definition of school functioning as a variable of students' academic success (Shaunessy et al., 2006; Robertson, 2013) and as a psychological indicator of school functioning (Suldo & Shaunessy-Dedrick, 2013a). Coping strategies utilized by adolescents in accelerated learning programs were also evaluated.

It is posited that accelerated learning students develop unique coping strategies to confront stressors (Suldo, Shaunessy, Michalowski, et al., 2008). Coping strategies were studied as a factor that can mediate the effects of stress thus affecting the psychosocial adjustment of adolescents (Nounopoulos et al., 2006; Suldo, Shaunessy, Michalowski, et al., 2008; Suldo & Shaunessy-Dedrick, 2013a). The participants' outcomes assisted the researcher to determine

correlations between specific strategies or resources used by adolescents to withstand the pressures of academically rigorous programs. Those results can be beneficial to future research.

The five intentions of this chapter are to 1) Describe the research design of this study, 2) Identify the participants and sample selection, 3) Explain the data collection procedure, 4) Explicate the statistical procedures used to analyze the data, and 5) Clarify any limitations of the study. The chapter concludes with limitations and delimitations that occurred during the research study and a description of the role of the researcher.

Research Questions

The following questions were used to guide this inquiry:

1. What are the relationships between psychosocial adjustment variables of adolescents enrolled in accelerated learning programs?
2. What is the relationship between the psychosocial adjustment of students in accelerated learning programs by grade level and by the number of college credit classes or SIP classes they are participating in?
3. What is the relationship between the psychosocial adjustment of students in accelerated learning programs by gender?
4. What coping strategies are being used by students in accelerated learning programs?

Research Design

This quantitative study used an explanatory correlation design. Correlation research designs are used to "describe and measure the degree of association (or relationship) between two or more variables or set of scores…researchers do not attempt to control or manipulate the variables as in an experiment; instead, they relate, using the correlation statistic" (Creswell,

2012, p. 339). This study examined the relationships between multiple variables of students participating in accelerated learning programs.

Two of the three independent variables, the number of ALP classes and the grade level of student were partitioned into subcategories to distinguish between levels for descriptive statistics. The number of ALP classes were separated into 1) one class, 2) two classes; and 3) three or more classes in one semester. The grade level variable was separated into categories of middle school (8th grade), early high school (9th grade), and high school (11th-12th grades) and also middle_early high school and high school when making associations with other variables. Middle school and early high school were combined as they share the same GPA scale of 4.0, share a similar age group (14 years), and participated in advanced learning program classes that were non-college credit bearing. The dependent, psychosocial adjustment variable contained two domains; psychosocial functioning and school functioning that are further separated into subcategories. Psychosocial functioning's subcategories included: stress, depression/anxiety, peer relationships, psychological well-being, and life satisfaction. School functioning's subcategories included: academic motivational beliefs, academic achievement, and school climate perception. Coping strategies and age were other factors examined in this study as being imperative to gaining more knowledge about students participating in accelerated learning programs. Conclusions were drawn from the study's results.

Participants

Study participants were selected through stratified sampling so that the sample would be representative of the population, (adolescents enrolled in accelerated learning programs), and thus inferences could be derived from the sample about the population (Creswell, 2015). Stratified sampling was used to control the sample for age and grade level. Balancing the sample between age

groups and grade levels further represented the population when less than 50% of the sample size were middle school students. This represented the increased opportunities for accelerated learning programs available to high school students with both college credit bearing classes and enriched classes.

The target population consisted of 9,434 students enrolled in at least one accelerated learning course in grades seven to twelve at public middle, and high schools in a Northwestern state. The school district was selected for inclusion in the study by review of the state department of education's report of reimbursement for accelerated learning programs. Total reimbursement was divided by the credit cost which was then divided by three, an average number of credits for one college class. This total was then divided by the district's average daily attendance (ADA) for a percentage of students enrolled in accelerated learning courses. The percentage of students enrolled in accelerated learning programs and the district's use of accelerated learning programs 7th to 12th grades, were used to invite the school district to be part of the target population.

When selecting a sample, the larger the sample, the less potential for sampling error (Tanner, 2012). Sample size was dependent upon permission granted by the school district and for participation in the study. A sample size of 93 students, (reduced from a collection sample size of 102 students due to nine students not meeting the criteria of being enrolled in at least one accelerated learning program class), was used in the study representative of the dual credit, AP®, and state incentive programs. Dual credit and AP® programs were selected as programs utilized throughout the Northwestern state generalized to the population of high school students. The state incentive program was chosen to represent middle and high school students who accelerated learning by taking classes advanced for their grade level. Fifty-seven percent of the sample size (n= 53) were high school students and 43% (n = 40) were middle school students. The age range was

12-18 years of age with a mean age of 15 years. Sixty-one percent of the participants were girls and 39% were boys. The March 1, 2017 middle school's average socioeconomic (SES) status was 44.2% and the high school's SES was 36.7% per district National School Lunch data. Students reported their SES status in response to the question, "Do you receive a free or reduced lunch" as: 14% "yes", 61% "no", and 25% "I don't know".

Permission was granted from the school district participating in this study (see Appendix C). Once district permission was granted, parental permissions, including the description and purpose of the study were sent to the targeted student sample by their school's designee (see Appendix D). Student assent was also procured from the student sample in which parental permission was returned (see Appendix E). The student assent form included the statement that the student could choose to stop participating in the study at any time without harm. District and school personnel, parents, and students were informed that students completing the survey would be receiving a $5.00 Amazon gift card for participating in the study. Parents and students were also informed of any possible risks to students' socio-emotional health or learning and students were provided a form listing the state's Suicide Prevention Hotline and contact names of the school administrator and school counselor (see Appendix F).

Data Collection

In April, 2016 Northwest Nazarene University's (NNU) Human Research Review Committee (HRRC) approved the study to be conducted (see Appendix G). Data was collected in October, 2016 by the researcher and in December, 2016 and February, 2017 by the research assistant and proctors, employees of the district. The author of this study oversaw the data collection methods and communicated directly with school designees to ensure data collection methods were followed as expected when in absence.

The target population of 9,434 students, grades seven to twelve, included students participating in accelerated learning programs in a Northwestern state during the 2016-2017 school year. A stratified sample was selected from the population's school district that granted permission to conduct the study. To generalize results, the target sample size was 100-150 students. Parent permission and student assent forms were given to 168 adolescents. 102 students returned the forms, a 61% return rate. This sample was further reduced to 93 students after nine students were removed from the study for failing to meet the criteria of at least one ALP class.

Study measures were administered in one 45-minute setting. A testing time frame, (not near other standardized testing windows, end or beginning of semesters, week before or after vacations), was given to the district's staff to eliminate tests lingering from being administered, decrease student lack of focus due to external variables, be best suited for districts and to implement a controlled window of testing opportunity. The school district chose an online version of the instruments where individual instruments were combined into one questionnaire. Specific directions for each instrument were printed within the electronic version. A time sample was completed prior to the study's completion of measurements to a group of teenagers that participate in accelerated learning programs but were not included in the study's sample to determine the total time allotment required.

Psychosocial functioning instruments evaluated students' perceived stress, psychopathology, peer relationships and life satisfaction. School functioning measures included school climate and motivational beliefs. Academic achievement (grade point average and attendance) was reported through first semester report cards that were redacted of personal information. Additional demographic information was collected via self-report during the online

survey completion included gender, age, and socioeconomic status. Students' privacy was respected by coding the students' names.

Measures

Overview of Likert Scales

Likert Scales evolved when Rensis Likert, PhD. devised a simpler method of measuring attitude than the commonly used Thurstone Methods of Scoring (Likert, 1932). By assigning numerical values for each of the responses, the numerical values could then be calculated as a sum or as an average (Likert, 1932). Controversy has persisted concerning the measurement level of Likert scales (Boone & Boone, 2012; Carifio & Perla, 2007). Carifio & Perla (2007) define a measurement scale as one that "is purposely constructed…inter-related set of items which have defined and targeted logical and empirical properties" (p. 112). They assert that Likert response format elicits interval data that can and should be analyzed at the scale level by parametric measures (Boone & Boone, 2012; Carifio & Perla, 2007; Sullivan & Artino, 2013). In this study, Likert scales have been analyzed by: central tendencies through reporting of means and standard deviations, (Boone & Boone, 2012), and medians (Sullivan & Aritino, 2013); correlation coefficients, ANOVA, (Analysis of Variance), and regression analysis (Boone & Boone, 2012; Sullivan & Artino, 2013).

Perceived Stress Scale (PSS). (Cohen, 2008-revised) Students' report academics are one of the major stress events of their lives during adolescence. The Perceived Stress Scale (PSS) is a multi-item, (4, 6, 10, or 14) self-report measure consisting of a 5-point Likert scale (0 = never to 4 = very often). Respondents are asked over the last month how often, for example, "have you felt nervous and "stressed"? The ten-item PSS was administered to determine perceived stress. Lee (2012) compared the psychometrics of the PSS-14, PSS-10, and PSS-4 through a review of

19 research studies that utilized the PSS. In twelve of these studies, the PSS-10's internal consistency reliability, as tested through the Cronbach's Alpha, measured adequately and was > .70 in every study (Lee, 2012). Its test-retest reliability was also >.70 in the four studies reviewed. Overall, the PSS-10 scored higher in its psychometric properties then the PSS-14 or PSS-4 (Lee, 2012). Due to the more comprehensive coping measure, ACOPE, being used in the study, four of the questions that measured perceived coping were eliminated with a total scale score (Tss) = 24 with a higher score indicating higher stress levels. The six-item PSS used in previous study by Suldo, Shaunessy, & Hardesty (2008) reported a Cronbach's alpha of 0.91. This study's Cronbach's alpha measuring internal consistency was .88 (see Appendix H).

Pediatric Symptoms Checklist – Youth Report (PSC-Y). (Pagano, Cassidy, Little, Murphy, & Jellineck, 2000). The PSC-Y is a 35-item child and adolescent self-report that measures psychosocial well-being including internalizing, externalizing, and attention problems (TeenScreen Primary Care, 2009). It is a Likert scale with three options, "0 = never, 1 = sometimes, 2 = often". Respondents are asked to select the option that "best fits you" with statements such as: "fidgety, unable to sit still", "feel hopeless", "blame others for your troubles". Sum scores of each domain (Tds) are: internalizing, Tds = 10; externalizing, Tds = 14; and attention, Tds = 10. Total scale scores = 70 and scores considered positive, ≥30, indicate "the likelihood that a youth is at risk for a significant mental health problem or suicide" (TeenScreen Primary Care, 2009). Two items that automatically determine a positive score if answered in the affirmative include "During the past three months, have you thought of killing yourself?" and "Have you tried to kill yourself?" (TeenScreen Primary Care, 2009). A specificity of 88% and sensitivity of 94% with a 12% false positive was reported by Columbia University's TeenScreen Primary Care program (2009). It also has a strong discriminative validity and .45 test-retest

reliability (Ontario Centre of Excellence for Child and Youth Mental Health, 2015). Internal consistency as measured by Cronbach's alpha for this study included .87 (internalizing problems), .74 (attention problems), and .73 (externalizing problems). According to Benchmark, Safety & Review, Inc.'s 2009 report, the TeenScreen program identified psychosocial issues in adolescents that school officials failed to recognize including an additional 31% of students with suicidal ideation or suicide attempt histories and 29.4% of students who could benefit from mental health services (see Appendix I).

Multidimensional Student Life Satisfaction Scale (MSLSS). (Huebner, 1994). The MSLSS is a 40-item, (Tss = 240) self-report measure that assesses adolescents' overall happiness in life in five areas: with family, friends, school, self, and living environment (Shaunessy et al., 2006). Sum scores of the five domains include: family, Tds = 42; friends, Tds = 54; school, Tds = 48; self, Tds = 42; and living environment, Tds = 54. The MSLSS consists of a 6-point scale (1 = strongly disagree to 5 = strongly agree) where respondents are asked over the last few weeks how often, for example, "I am fun to be around". Used with youth grades 3 – 12, greater life satisfaction is portrayed by higher mean scores (Suldo, Shaffer, & Riley, 2008). To be compared to the statements written in the affirmative, reverse scoring is instituted. Items #3, #4, #9, #13, #23, #24, #27, #32, #34, and #39 are reverse-scored during analysis due to being stated in the negative, "I feel bad at school", "I wish I didn't have to go to school", "My friends are mean to me", etc. The MSLSS's internal consistency or coefficient alpha was .79 to .92 in multiple studies (Suldo, Shaffer, & Riley, 2008; Suldo & Shaunessy-Dedrick, 2013a). This study's Cronbach alpha for each domain included: family (.94), friends, (.91), school, (.89), living environment (.86), and self (.85) (see Appendix J).

Adolescent Coping Orientation for Problem Experiences (ACOPE). (Patterson & McCubbin, 1987). The ACOPE, a 5-point Likert scale (1 = never to 5 = most of the time), measures actions that adolescents use to manage difficult experiences (Suldo, Shaunessy, & Hardesty, 2008). The study used a 19-item, revised version of the ACOPE used in previous studies with high school students and based upon a four factor model including: positive appraisal, negative avoidance, family communication, and anger (Suldo, Shaunessy, & Hardesty, 2008). The ACOPE-19's Tss = 95 with each domain Tds: positive appraisal, Tds = 25; negative avoidance, Tds = 20; family communication, Tds = 25; and anger, Tds = 25. Examples of statements in response to "when you face difficulties or feel tense, how often do you" include: "get angry and yell at people" (Anger); "talk to your father when something bothers you" (Family Communication); "drink beer, wine, liquor" (Negative Avoidance); and "try to think about the good things in life" (Positive Appraisal). Six items are reverse scored for comparison to positive statements: #6, #8, #9, #14, #16, and #17. The ACOPE's Cronbach's alpha has ranged from 0.69-0.76 for individual variables (Suldo, Shaunessy, & Hardesty, 2008) This study's Cronbach's alpha reported acceptable internal consistency of .76 (Family Communications), .76 (Positive Appraisal), .76 (Anger), and .85 (Negative Avoidance). One item was deleted in the negative avoidance factor, ("use drugs prescribed by your doctor"), increasing reliability for that factor (see Appendix K).

Student Attitude Questionnaire (Academic Beliefs & Subjective Task Value). This scale, based upon Expectancy-value theory, is designed to record an adolescent's self-perception of success on tasks and difficulty of tasks. It also records the amount of value an adolescent attaches to a task through his or her motivation or desire to complete it. This study used no Tss, utilizing only individual domain scores for each category: ability/expectancy, Tds = 35; task

difficulty, Tds = 21; required effort, Tds = 28; intrinsic interest value, Tds = 14; attainment value/importance, Tds = 21; and extrinsic utility value, Tds = 14. Questions were presented in a Likert scale with a range of 1 to 7. Examples of questions include: “How much do you like doing math?” (intrinsic interest value); “How hard do you have to try to get good grades in math?” (required effort); and “If you were to order all the students in your math class from the worst to the best in math, where would you put yourself?” (ability/expectancy). The Alpha coefficient of each construct (Perceived Task Value items: Intrinsic Interest Value, Attainment Value/Importance, Extrinsic Utility Value; Ability/Expectancy-Related items; and Perceived Task Difficulty items: Task Difficulty and Required Effort) were reported as .76, .70, .62, .92, .80, and .78 respectively based upon a sample of 572 adolescents, grades 6 – 12 (Eccles & Wigfield, 1995). The Cronbach alphas’ of this study’s constructs of the Student Attitude Questionnaire were: .81 (intrinsic interest value), .71 (attainment value/importance), .64 (extrinsic utility value), .90 (ability/expectancy), .83 (task difficulty), and .83 (required effort) (see Appendix L).

School Climate Survey. School climate is a component of school functioning and is measured due to its positive correlation of it with academic success, motivation and positive psychosocial functioning (Fan et al., 2011; Loukas & Robinson, 2004). The school climate survey measured students’ perceptions of their school’s climate including: teaching and learning, (Tds = 55); student relationships, (Tds = 20); emotional environment, (Tds = 70); and parent support (Tds= 10 after removal of one item). Examples of survey statements include: “My parents ask if I’ve gotten my homework done” (parent support); “My teachers really care about me” (emotional environment); and “Students in my school treat each other with respect” (student relationships). Items reverse-scored included: #2c, #3b, #5f, #5g, and #5h. The measure has had

psychometric analyses resulting in three measures of "goodness of fit" including the coefficient of determination (CD), standardized root mean squared residual (SRMS), and the Tucker-Lewis Index (TLI). Each factor of the school climate survey resulted in at least two of three "goodness of fit" measures being statistically significant: teaching and learning (.93 TLI, .03 SRMR, and .89 CD); student relationships (.01 SRMR and .89 CD); emotional environment (.07 SRMR and .87 CD); and parental support (.96 TLI and .02 SRMR). Reliability of the school climate inventory's four factors were determined during data analysis resulting in both uncertain and adequate Cronbach's alphas of .88 (teaching and learning), .68 (student relationships), .84 (emotional environment), and .53 (parent support). A parent support item, "my family wants me to do well in school" was removed and Cronbach alpha increased to .66 (see Appendix M).

Academic achievement. School report cards were reveiewed to determine cumulative grade point averages (GPA), individual classes students were enrolled in, and attendance. To determine academic performance, GPA was calculated on a scale of 0-4 for eighth and ninth grade students (A = 4.0, B = 3.0, C = 2, D = 1, and F = 0. Eleventh and twelfth grade students' GPAs were assigned a scale of 0-5 to account for college level classes (A = 5.0, B = 4.0, C = 3.0, D = 2.0, and F = 0). GPAs were calculated by assigning each core class (English, social studies, science, and math) the number equivalent to the semester grade earned. Additional classes earning college credit were included in eleventh and twelfth grade GPA calculations. The sum of these grades were then divided by the number of classes for the GPA value. Attendance was determined by adding the number of absences in the classes included in the GPA calculation and the sum divided by the number of classes. Other demographic information (gender, age, and socioeconomic status) was obtained by the respondents' self-reports.

Analytical Methods

Erikson's psychosocial theory of development posits that feelings of failure and the sense of inferiority can arise when children cannot be successful in their school work and that this inferiority complex can develop into lower self-image as children evolve into adolescents. (Earp, 2012). Adolescence is the most stressful time of life according to Erikson's *Identity vs. Identity Confusion* stage. Becoming independent from family during this stage and unstable peer relationships are stressful to adolescents; however, academic stressors can be just as if not more stressful than family and peers especially for students in accelerated learning programs (Shaunessy et al., 2006).

This study's theoretical framework, *Lives in School Contexts* (Eccles et al., 2000), incorporates the ego (adolescent psychosocial functioning) and ethos (school social contexts) of Eriksonian theory and guides the research questions. Several analytical methods were performed in answering these questions:

1. What are the relationships between psychosocial adjustment variables of adolescents enrolled in accelerated learning programs?
2. What is the relationship between the psychosocial adjustment of students in accelerated learning programs by grade level and by the number of accelerated learning program classes?
3. What is the relationship between the psychosocial adjustment of students enrolled in accelerated learning programs by gender?
4. What coping strategies are being used by students in accelerated learning programs?

Question 1. Pearson product-moment correlations using SPSS Statistics (version 24) were completed to determine the relationships between the continuous psychosocial adjustment

variables used in analyses. Preliminary analyses included: scatterplots for linear relationships and outliers in data and the Shapiro-Wilk test for normality of data distribution. Spearman rank-order correlation was used for two variables (attendance and parent support) that did not have normal distribution. Multiple linear regressions were used to further determine the magnitude of relationships amongst those variables that demonstrated a moderate to strong negative or positive relationship through the Pearson or Spearman correlations.

Question 2. Central tendencies for demographics of the continuous independent variables, grade level and number of ALP classes, were determined as an overview of trends. To find correlations between the continuous measurement of grade level, continuous measurement of number of ALP classes, and the ordinal psychosocial adjustment variable, Spearman rank-order correlation coefficients were conducted after testing for monotonic relationships between variables. The grade level variable was separated into three categories for descriptive statistics: (MS, early HS, and HS) and two variables for conducting the Spearman rank-order correlation (MS_earlyHS and HS). The number of ALP classes variable was separated the number of classes participants took first semester (1 class, 2 classes, and 3 or more classes) for descriptive statistics. A one-way ANOVA was used to determine differences between the means of grade level and MSLSS as four of the five domains of the MSLSS were statistically significant associations of weak to moderate strength and thus further investigation was warranted.

Question 3. To find correlations between the nominal measurement of gender and the ordinal psychosocial adjustment dependent variable, a point-biserial correlation coefficient (r_{pb}) was utilized. Point-biserial correlations inspect the strength of the relationship between dichotomous variable and continuous variables (Laerd, 2016). Preliminary analyses for the point-biserial correlation included: testing for outliers by use of boxplots; homogeneity of variances in

each group of the dichotomous variable through the Levene's Test for Equality of Variances; and approximately normal distributions as evidenced by Shapiro-Wilk test ($p > .05$).When variables violated data distributions of normality or the assumption of homogeneity, the rank-biserial correlation (r_{rb})was utilized as the point-biserial correlation can be sensitive to outliers and non-normal data distribution (Mukaka, 2012). The coefficient of determination (r_{pb}^2 or r_{rb}^2) was calculated with both correlations to determine the amount of variance between the variables, or their effect sizes. The Fisher's exact test was used to examine the two dichotomous variables of the "yes" or "no", categorical question relating to thoughts of suicide and attempts of suicide in association with gender.

Question 4. Determining the coping strategies used by students in accelerated learning programs were evaluated through descriptive statistics. Medians and means were compared to the independent variables: (a) number of ALP classes, (1 class, 2 classes, or 3 or more classes); (b) gender; and (c) grade level (middle school, early high school, and high school). Observations of the comparisons were created in a table and reviewed in Chapter 5.

Correlation Coefficient Interpretation Scale.

Correlation coefficients are interpreted on a -1 to +1 scale. Size is determined by the value being close to 1 regardless of the negative or positive sign as those denote the correlation between the two variables and not the strength. A negative correlation is also known as an indirect correlation, occurring when variables move in opposite direction; positive correlation or direct correlation, taking place when variables move in the same direction (Salkind, 2014). The size of the correlation coefficient used in this study: very weak = .0 to .2; weak = .2 to .4; moderate = .4 to .6; strong = .6 to .8; and very strong = .8 to 1.0 (Salkind, 2014).

Point-biserial and Rank-biserial Correlations.

Point-biserial (r_{pb}) and rank-biserial (r_{rb}) correlations determine the association between a dichotomous variable and continuous variable. The strength of the relationship is ± 1 with the "-" or "+" sign in the calculated results signifying the strength of the variable coded with the higher number of the dichotomous variable (Laerd Statistics, 2015). In this study, males = 0 and females = 1. Thus, a negative point-biserial correlation result would mean that females had a weaker relationship with the paired variable than males. A positive result would indicate females having the stronger relationship than males with the paired variable.

Limitations and delimitations

"Limitations derive from the conceptual framework and the study's design" (Marshall & Rossman, 2016, p. 85). There are several limitations to this study that may affect generalization to the population. First, the Northwestern state's geographic location is rural regardless if the school district is located in an urban setting when compared to more populous states. Thus, the results may not generalize to more populated states where urban schools' student populations may not be reflective of the sample's school district that is approximately 9,000 students. Representation of the northwestern state was also limited by inclusion of only one school district's participation. Having a larger, more diverse sample of schools from within the state may have created different results. Also, state funded programs differ amongst states. Some states only pay for Professional Technical Education (PTE) programs; others do not offer funding for accelerated learning; while other states only fund junior and senior class level students (NCLS, 2014). Two of the classes surveyed completed the surveys close to a twelve-day scheduled district break from school elongated by an additional four days due to inclement weather. While one group's completion of surveys occurred seven days prior to the break (n= 22), due to the research assistant's schedule, the last student group did not complete the surveys

until after the district's break, subsequently after the beginning of semester two of the school year (n = 12). This anomaly was determined to not affect the outcome of the students' responses to the individual questions of the assorted measurements. Additionally, while there is ample data regarding the effects of accelerated learning and college readiness, research is still emerging in relation to psychosocial adjustment and accelerated learning (Robertson, 2013; Suldo & Shaunessy-Dedrick, 2013a).

Delimitations are limitations that the researcher chooses not to do in the scope of his or her study. Those that were included in this research study were a) the choice of instruments to include, b) the choice to concentrate the research efforts in the "Adolescent Functioning" domain of the *Lives in School Context* theoretical model, and c) the determination to exclude outliers in the data collection process. Due to the number of instruments included in the study (six measurements and a demographic form), some of the instruments utilized in previous studies that correlated the effects of students enrolled in accelerated learning programs and their psychosocial functioning or school functioning would have created a lengthier administration time. Thus choices to include shorter versions of the previously used instruments or an alternate instrument were made. Studying the relationship between the two domains of the *Lives in School Context* model was chosen to be reserved for future study due to the breadth of correlations already being considered with "Adolescent Psychosocial Functioning". Determining to include or exclude outliers were given careful consideration during analyses. One participant's GPA and attendance was excluded from the study as being extreme, (GPA = 0, attendance > 30 days), and not a representation of the population.

Research is nominal regarding students in accelerated learning and psychosocial adjustment by age and number of accelerated learning classes This study expanded empirical

studies in these areas, especially with middle school aged adolescents (Shaunessy & Suldo, 2010; Suldo & Shaunessy-Dedrick, 2013b). In 2014, Giani et al. analyzed dual credit enrollment according to the number of classes in junior and senior students. However, their study concentrated on the impact of dual credits and success in post-secondary education unrelated to students' psychosocial adjustment in high school (Giani et al., 2014).

Role of Researcher

The role of the researcher considers one's personal experiences, devotion to the topic, ethics, positionality, etc. (Marshall & Rossman, 2016). Careful consideration was given to this study's purpose. As a school counselor for fifteen years and currently employed in a college preparatory school (K-12), the desire to find empirical answers to the research questions is of importance. Educators can speculate how accelerated learning affects students' psychosocial functioning, but can they really know without having supporting, research driven data? Psychosocial well-being during adolescence is important during this transitional period in life. Stress can lead to psychosocial issues, dropping out of school, decreased life satisfaction and more (Suldo & Shaunessy-Dedrick, 2013a). Research has shown that students enrolled in accelerated learning programs may experience more stress in the academic area than their general education peers (Suldo & Shaunessy-Dedrick, 2013a; Suldo et al., 2009). This correlation between accelerated learning programs and increased academic stress deserves attention as more students engage in these programs to be college ready.

As career and college readiness efforts across the United States increase (Giani et al., 2014; Hoffman et al., 2009; Puyear et al., 2001; Richardson, 2007), I personally desire to know the answers to my research questions so that the results of the study can be shared globally. This study is expanding research already being conducted concentrated to a limited geographic

area while also venturing into newer research areas as well when evaluating psychosocial effects of students from middle school to high school and the number of accelerated learning classes they are taking during one semester. It is my role as researcher to remain unbiased and to report the outcomes as they exist. To eliminate bias, I did not include students enrolled in the middle school or high school where I am employed in the study's sample. It is also my ethical duty to ensure that the study's participants are well versed to the purpose of the study and its implications in participating; as well as, retaining confidentiality through parental informed consent and student assurances.

Chapter IV

Results

Introduction

Determining relationships of (a) psychosocial adjustment variables amongst themselves, (b) by grade level, gender, and by the number of ALP classes, and (c) by coping strategies, is an area of research that requires further investigation. Determining how to support students in the rigorous accelerated learning programs is still lacking in research (Shaunessy-Dedrick et al., 2014). Current research in this topic is mainly focused on high school students; however, younger students are exploring ALPs as college and career readiness efforts continue throughout the United States and states fund the acceleration of studies to younger students. This study included the following research questions in the quest for adding to the body of research in the area of a) the relationship of participation in accelerated learning programs to adolescents' psychosocial adjustment and b) identifying coping strategies used by adolescents in ALP courses of study:

1. What are the relationships between psychosocial adjustment variables of adolescents enrolled in accelerated learning programs?
2. What is the relationship between the psychosocial adjustment of students in accelerated learning programs by grade level and by the number of accelerated learning program classes?
3. What is the relationship between the psychosocial adjustment of students enrolled in accelerated learning programs by gender?
4. What coping strategies are being used by students in accelerated learning programs?

Quantitative Results

Question 1: Relationships between psychosocial adjustment variables of adolescents enrolled in an ALP.

Overview.

Determining the relationships between the psychosocial adjustment variables involved in the study gave greater understanding to the social-emotional well-being and school functioning of adolescents participating in ALPs. The measurements included in the study and a short review are included in this overview. Psychosocial functioning was measured by three instruments. The PSS-10 was abbreviated by eliminating the four reverse scored items (#4, #5, #7, and #8) measuring perceived coping ability due to a more comprehensive assessment that measured coping abilities (Suldo, Shaunessy, & Hardesty, 2008) with reliability measured by Cronbach's alpha = .88. Higher scores on the PSS (Tss = 24) denote elevated stress levels (Cohen & Janicki-Deverts, 2012). The PSC-Y (Tss = 70) tested for psychological factors that could indicate mental health problems including two questions directly related to suicide, ideation and attempts to kill oneself. The PSC-Y included three groups: internalizing problems (Tds = 5), attention problems (Tds = 5), and externalizing problems (Tds = 7). The MSLSS measures life satisfaction in five categories: family (Tds = 42), friends (Tds = 54), school (Tds = 48), living environment (Tds = 54), and self (Tds = 42). The higher the MSLSS score, (Tss = 240), the higher life satisfaction one has.

School functioning's measurements included school motivation, school climate, academic achievement, and school attendance. The Student Attitude Questionnaire examines adolescents' perception of their success on tasks (ability), task difficulty, and subjective task value (Roeser et al., 2000). The categories include: ability/expectancy (Tds = 35), task difficulty (Tds = 21),

required effort (Tds = 28), intrinsic interest value (Tds = 14), attainment value (Tds = 21), and extrinsic utility value (Tds = 14). There is no scale score calculated. The School Climate Survey assessed students' perceptions in the areas of: emotional environment (Tds = 70), student relationships (Tds = 20), teaching and learning (Tds = 55) and parent support (Tds = 10). No scale score is determined. Grade point average (GPA) was calculated on a 4.0 scale for middle school and early high school students and a 5.0 scale for high school students due to the weight of college credit-bearing classes. Only core classes, (English, math, social studies including Economics (HS), and science), and ALP classes were included in the calculation excluding elective classes at the middle or high school level. Report cards from the first semester of the 2016-2017 school year were used for the analyses. Attendance was calculated by determining number of absences from classes included in the study as determined by first semester report cards.

Other variables included in the correlation comparison were coping and age. They were included as they may have statistically significant relationships amongst the other variables. What relationship they might have was of interest to discover. Variables parent support and attendance were calculated for association with the 16 other variables using Spearman's rank-correlation. The correlation matrix depicting all Pearson product-moment correlations regardless of being statistically significant can be found in Appendix Q.

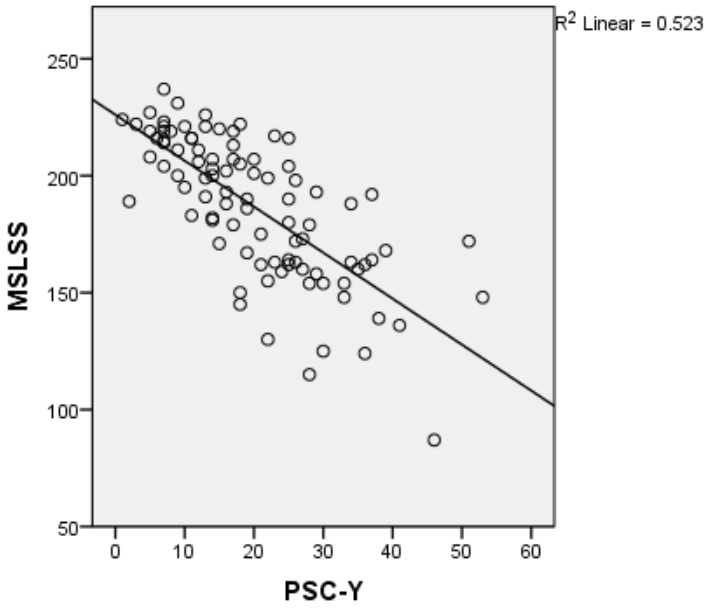
Results.

The Pearson product-moment correlation was used to find the strengths of relationships between psychosocial adjustment and coping and age variables. Relations among variables were linear as seen by scatterplot examples in Figures 5a-5d. Variables normally distributed as assessed by Shapiro-Wilk's test are displayed in Table 3.

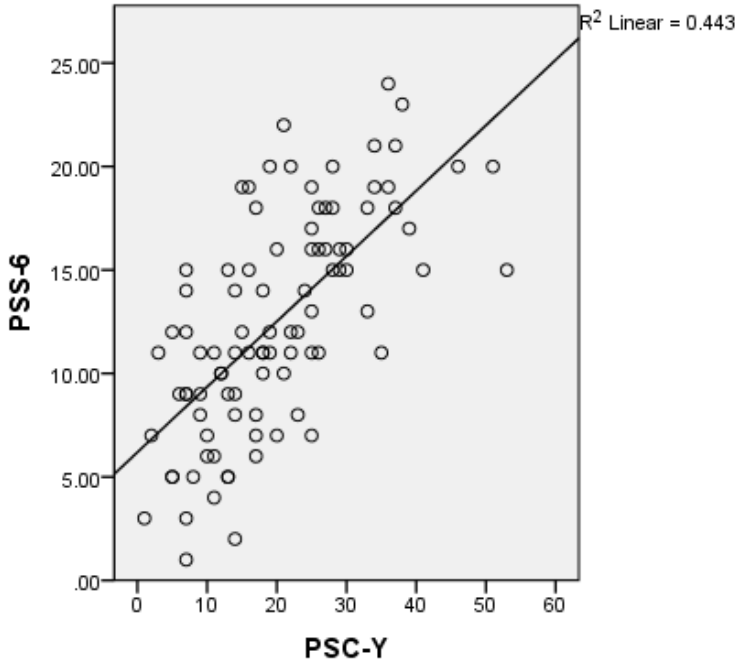
Figures 5a-5d

Scatterplots of Linear Relationships of Psychosocial Adjustment Variables

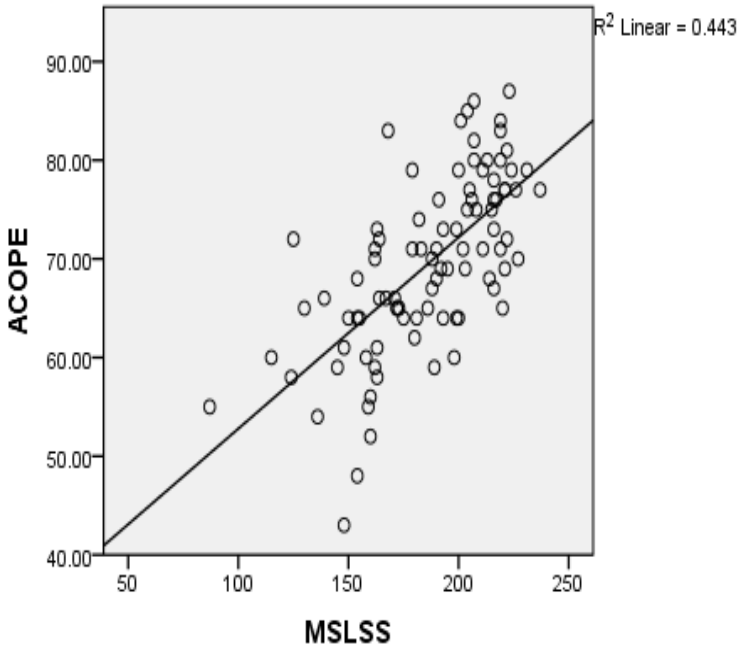
a) MSLSS, $r = -.72$, $p < .0005$



b) PSS-6, $r = .67$, $p < .0005$



c) ACOPE, $r = .67$, $p < .0005$



d) Teaching & Learning, $r = .54$, $p < .0005$

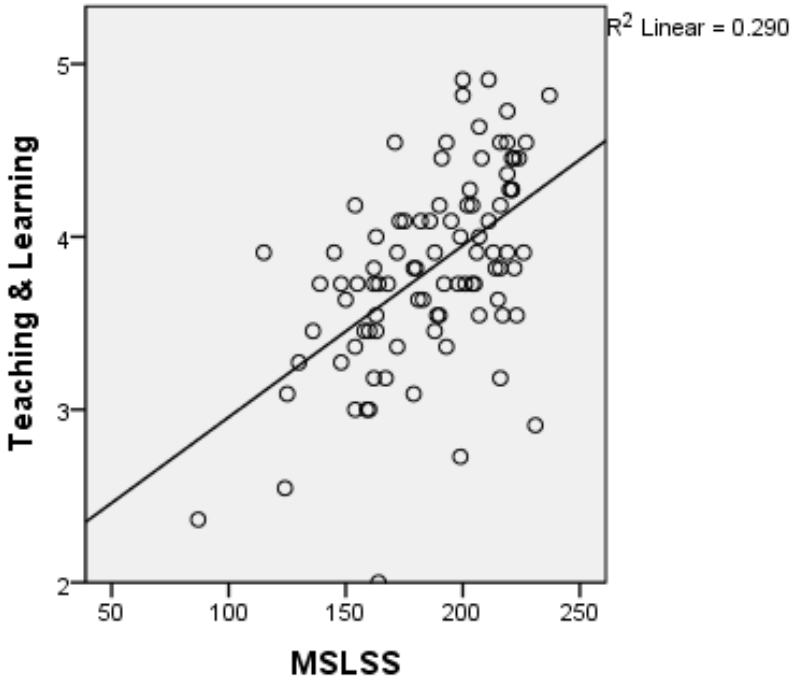


Table 3

Test of Normality of Psychosocial Adjustment and Age Variables

	Shapiro-Wilk		
	Statistic	df	Sig.
How old are you?	.935	13	.401
PSS6_SUM	.964	13	.819
ACOPE_SUM	.892	13	.105
MSLSS_SUM	.945	13	.530
PSCY_SUM	.993	13	1.000
PSCY_HIGHRISK	.993	13	1.000
ABILITY	.912	13	.195
TASK	.969	13	.884
EFFORT	.929	13	.327
INTRINSIC	.932	13	.365
ATTAINMENT	.953	13	.637
EXTRINSIC	.981	13	.984
EMOTION_ENV	.973	13	.930
STU_REL	.937	13	.415
TEACH_LEARN	.941	13	.464
PAR_SUP	.828	13	.015
GPA	.938	13	.428
ATTENDANCE	.807	13	.008

Table 4

Correlation Coefficients of Psychosocial Adjustment & Other Variables (Pearson's)

Strength of Association	Type of Strength	Variable 1	*r*	r^2	Variable 2
Strong	Positive	PSS-6**	.67	45%	PSC-Y
		ACOPE**	.67	45%	MSLSS
	Negative	MSLSS**	-.72	52%	PSC-Y
Moderate	Positive	Teaching & Learning**	.54	29%	MSLSS
		Emotional Environment**	.52	27%	MSLSS
		Attainment Value**	.48	23%	MSLSS
		Emotional Environment**	.46	21%	ACOPE
		Extrinsic Utility Value**	.43	18%	MSLSS
	Negative	PSS-6**	-.57	32%	MSLSS
		ACOPE**	-.52	27%	PSC-Y
		Teaching & Learning**	-.51	26%	PSC-Y
		ACOPE**	-.50	25%	PSS-6
		Emotional Environment**	-.42	18%	PSC-Y
Weak	Positive	Extrinsic Utility Value**	.37	14%	Emotional Environment
		Attainment Value**	.37	14%	Teaching & Learning
		Teaching & Learning**	.37	14%	ACOPE
		Intrinsic Interest Value**	.36	13%	MSLSS
		Extrinsic Utility Value**	.35	13%	Teaching & Learning
		Ability/Expectancy**	.35	13%	GPA
		Attainment Value**	.31	10%	Emotional Environment
		Ability/Expectancy**	.30	9%	MSLSS
		Intrinsic Interest Value**	.29	8%	Teaching & Learning
		GPA**	.28	8%	Age
		Ability/Expectancy**	.28	8%	Teaching & Learning
		ACOPE*	.22	5%	Extrinsic Utility Value
	Negative	Extrinsic Utility Value**	-.38	14%	PSC-Y
		Teaching & Learning**	-.35	13%	PSS-6
		Attainment Value**	-.33	11%	PSC-Y
		Attainment Value*	-.25	6%	Age
		MSLSS*	-.25	6%	Age
		Intrinsic Interest Value*	-.23	5%	PSC-Y
		Task Difficulty*	-.23	5%	Emotional Environment
		Task Difficulty*	-.23	5%	MSLSS
		ACOPE*	-.23	5%	Age
		Attainment Value*	-.23	5%	PSS-6
		Extrinsic Utility Value*	-.23	5%	PSS-6
		Ability/Expectancy*	-.22	5%	PSC-Y
		Emotional Environment*	-.21	4%	PSS-6

Note. n = 14 (PSC-Y HR); n = 92 (GPA and Attendance); n = 93 (all remaining variables)
**Correlation significant at alpha < .05 **Correlation significant at alpha < .01*

A comprehensive list of the statistically significant correlations were created in Table 4. Table 5 shows variables parent support and attendance that violated the assumption of normality and were calculated by Spearman's rank-correlation. A complete correlations matrix is located in Appendix Q.

Table 5

Correlation Coefficients of Parent Support & Attendance (Spearman's rho)

Strength of Association	Type of Strength	Variable 1	r_s	r_s^2	Variable 2
Weak	Positive	MSLSS**	.29	8%	Parent Support
		Extrinsic Utility Value*	.24	6%	Parent Support
		ACOPE*	.23	5%	Parent Support
		Emotional Environment*	.22	5%	Parent Support
	Negative	Age**	-.36	13%	Parent Support
		GPA*	-.26	7%	Attendance
		Teaching & Learning*	-.26	7%	Attendance
		Attainment Value*	-.21	4%	Attendance

Note. n = 92 (GPA and Attendance); n = 93 (all remaining variables)
**Correlation significant at alpha < .05 **Correlation significant at alpha < .01*

Variable PSC-Y HR was omitted from the comprehensive list of correlation coefficients as a subset of PSC-Y. Multiple relationships were created with both variables as students' responses were included in both the population of PSC-Y and PSC-Y HR, (n = 14). Teaching & learning that had the strongest relationship of any variable match, (with PSC-Y HR, r = -.81, p = .001) and it also had a moderate, negative association, r = -.51, p < .0005, with PSC-Y. ACOPE, r = -.67, p = .009, had a strong, negative relationship with PSC-Y HR and its association with PSC-Y was a moderate, negative association, r = -.52, p < .0005. MSLSS, r = -.70, p < .0005 and intrinsic value, r = -.54, p = .05, also had moderate, negative associations with PSCY-HR.

Of the 17 other variables besides PSC-Y HR included in the correlation, there were 46 variable associations that were significantly significant from the research study's sample. Of the strongest 15% of those associations, 71% of those relationships involve MSLSS or life

satisfaction. MSLSS (life satisfaction), PSC-Y (psychological factors), teaching and learning, (school climate domain), PSS-6 (stress), and emotional environment (school climate domain) comprised 49% of the variables creating the 46 statistically significant variables.

The school climate domain, teaching and learning, had multiple relationships with both psychosocial functioning variables and school functioning variables. It had a moderate, positive relationship with MSLSS, $r = .54$, $p < .0005$, and a moderate, negative association with PSC-Y, $r = -.51$, $p < .0005$. Teaching and learning questions of the questionnaire included statements that students chose an answer from 1 to 5 signifying "never" to "most of the time": "My teachers give me lots of encouragement", "My teachers often assign homework that helps me learn", and "Adults at this school are usually willing to make the time to give students extra help." As students perceive their teachers to be respectful, helping, and attentive to their needs, life satisfaction increases and psychological behaviors such as sadness (internalizing), concentration problems (attention), and classroom misbehavior (externalizing) are lessened.

Multiple Linear Regression.

"A simple linear regression assesses the linear relationship between two continuous variables to predict the value of a dependent variable based on the values of an independent variable" (Laerd Statistics, 2015, retrieved from: https://statistics.laerd.com/). Linear regression also allows the researcher to examine the direction and significance of variable relationships and conclude "how much of the variation in the dependent variable is explained by the independent variable" (Laerd Statistics, 2015, retrieved from: https://statistics.laerd.com/). In this study, the strongest, statistically significant correlations between the psychosocial adjustment variables, (0.54 to -0.81) were further examined by linear regression. While the predictions element of linear regression is outside the scope of this study, linear regression allows the researcher further

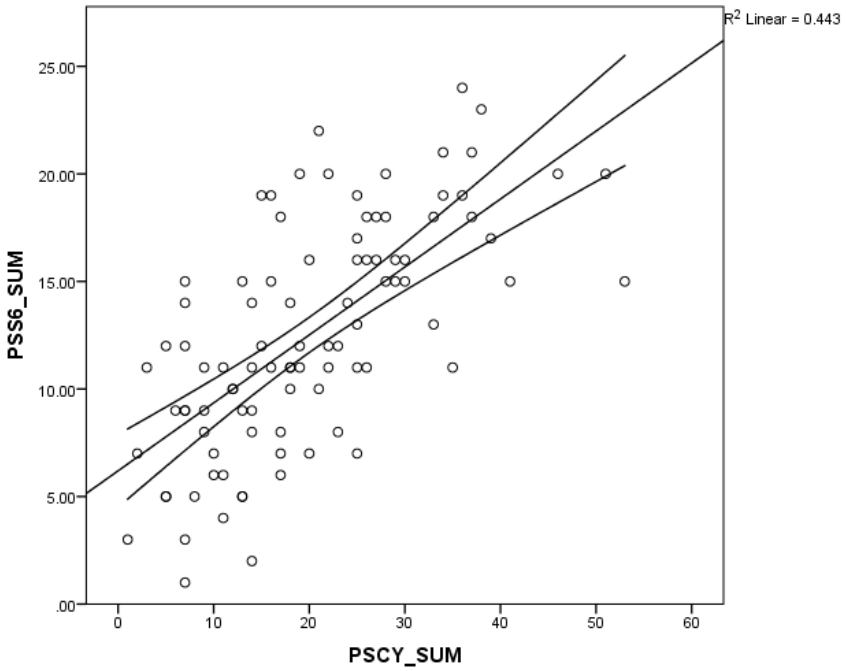
information about the strength and variance of variables' relationships. Assumption testing was completed on each paired variable including examination of scatterplots for linearity; reviewing Durbin-Watson test for independence of observation or independence of residuals; assessing diagnostics for outliers; homoscedasticity; and normal distribution of residuals. Of the 10 paired variables, one was excluded for having an outlier. Two other paired variables with one outlier each were included as the removal of the outlier had no significant effect on the results with the outlier. A table containing the results of the repeated simple linear regressions can be found in Appendix S.

Three linear regressions were related to PSCY-HR, the indicator of high risk for mental health issues. Linear regression determined that Teaching and Learning could statistically significantly predict PSC-Y HR, $F(1,12) = 22.22$, $p < .0005$ and Teaching and Learning accounted for 64.9% of the variability of PSC-Y HR. It also concluded that ACOPE could statistically significantly predict PSC-Y HR, $F(1,12) = 9.60$, $p = .009$, accounting for 44.4% of the variability of PSC-Y HR. The MSLSS could also statistically significantly predict PSC-Y HR, $F(1,12) = 99.89$, $p < .0005$, accounting for 49.6% of the variability in PSC-Y HR. Each paired variable had large effect sizes.

Other notable relationships include: (a) ACOPE could statistically significantly predict MSLSS, $F(1,91) = 72.46$, $p < .0005$ and ACOPE accounted for 44.3% of the variability of MSLSS; (b); PSS-6 could statistically significantly predict MSLSS, $F(1,91) = 42.87$, $p < .0005$, accounting for 32% of the variability of MSLSS; and (c) PSS-6 could statistically significantly predict PSC-Y, $F(1, 91) = 72.44$, $p < .0005$, accounting for 44.3% of the variability in PSC-Y, Figure 6 shows the linear relationship and prediction interval of PSS-6 and PSC-Y.

Figure 6

Prediction Interval of PSS-6 and PSC-Y



Question 2: The relationship between the psychosocial adjustment of students in ALPs by grade level and by the number of ALP classes.

Overview.

Four grades represented the study's sample separated into three categories: middle school (8th grade), early high school (9th grade), and high school (11th and 12th grade) as represented in Table 6. Grade level was chosen as the variable to study instead of age as 14-year-old students occupied both middle and early high school categories in the sample as depicted in Table 7.

Students were analyzed by the number of ALP classes they were participating in during first semester. This requirement excluded nine students from the study. The student sample examined students enrolled in 1 class, 2 classes, or 3 or more classes as seen in Table 8.

Table 6

Research Study's Sample Demographics by Grade Level

Grade Level	n	Percentage	Male n	Percentage	Female n	Percentage
MS	40	43%	15	37.5%	25	62.5%
Early HS	11	12%	5	45.5%	6	54.5%
HS	42	45%	16	38.1%	26	61.9%

Table 7

Grade Level Study Participants by Age

Grade	Age	Percentage of Grade Level	Male	Female
MS	12	2.5%	0	1
	13	57.5%	10	13
	14	40.0%	5	11
Early HS	14	54.5%	2	3
	15	45.5%	4	2
HS	16	33.3%	3	11
	17	52.4%	9	13
	18	14.3%	4	2

The student sample was separated further as shown in Figure 7 illustrating the distribution of the number of ALP classes (1 class, 2 classes, or 3 or more classes) by grade level. High school has been separated into both 11th and 12th grades for comparison.

Table 8

Sample's Distribution of Enrollment in ALP Classes

# of ALP Classes	n	Percentage of Sample
1 class	51	55%
2 classes	17	18%
3 or more classes	25	27%

Statistical analyses for both grade level and number of ALP classes variables was completed using Spearman rank-order correlation due to the questionability of the two variables having normal distribution with the dependent variables. During preliminary analysis for the parametric measure, Pearson product-moment correlation, due to normality, as measured by Shapiro-Wilk's test had numerous warnings to the inability of statistical analyses not being able to be conducted and cases omitted. Spearman's rank-order correlation was chosen as the statistical test as it is deals with violations of normality more vigorously than Pearson's correlation (Laerd Statistics, 2015).

Grade levels and psychosocial functioning variables.

Stress.

To establish the relationship between grade level and stress (PSS-6), a Spearman's rank-order correlation was conducted. Preliminary analysis showed the data distribution to be

monotonic as seen by scatterplot. There was a statistically significant, weak positive correlation between grade level and stress, $r_s(91) = .27$, $p = .01$.

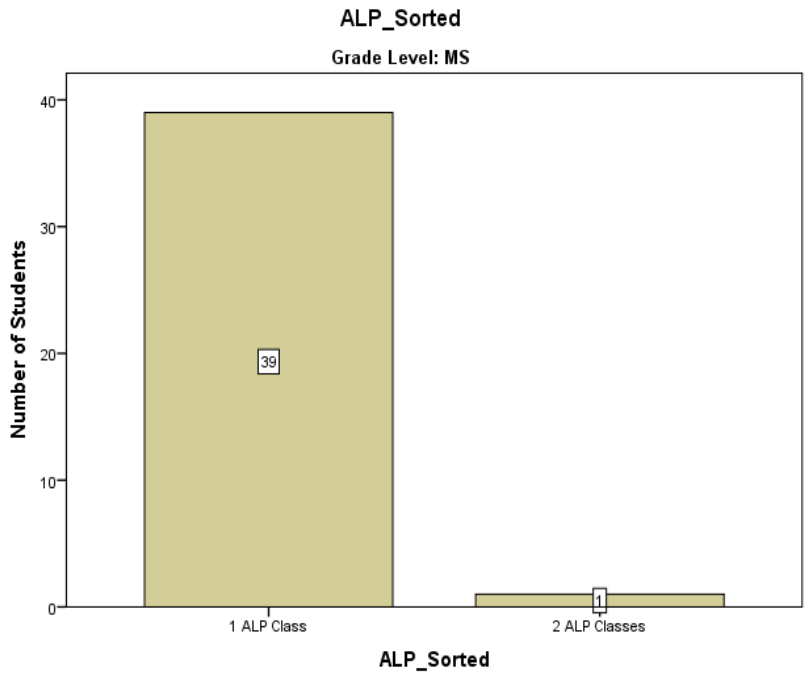
Psychological indicators: Internalizing and externalizing behaviors.

The relationship between grade level and psychological factors (PSC-Y) in the categories

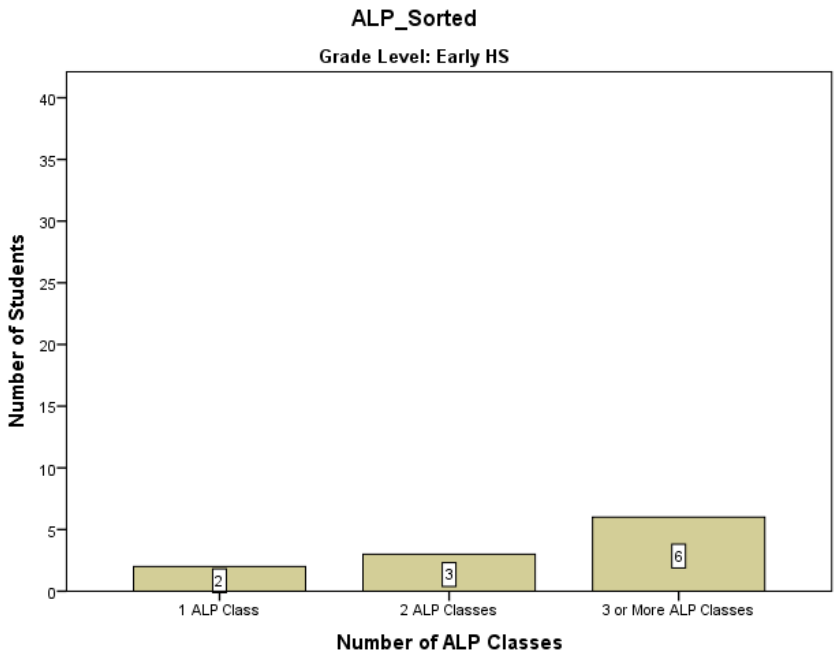
Figure 7a – 7d

Number of ALP Classes by Grade Level

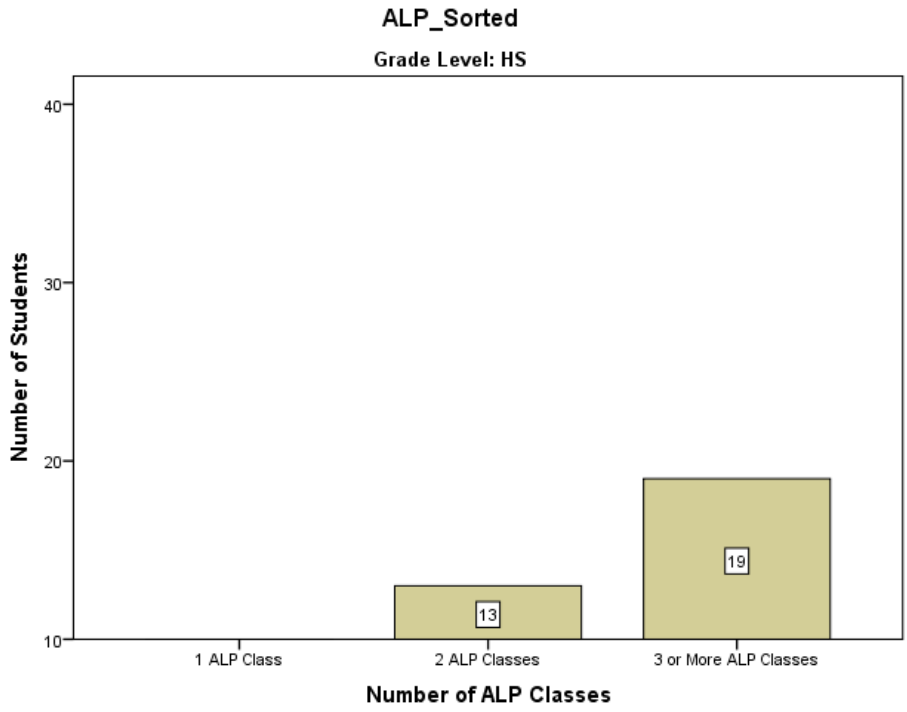
a) Middle School



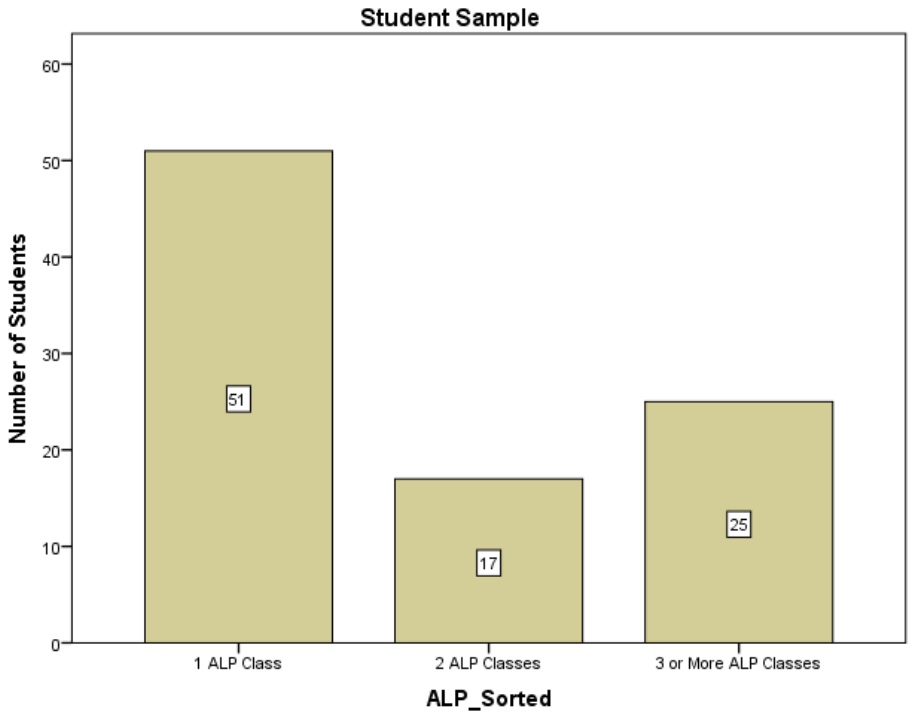
b) Early High School



c) High School



d) All Students



The relationship between grade level and psychological factors (PSC-Y) in the categories of internalizing, externalizing and attention problems and the sum of individual items on the PSC-Y was determined by a Spearman's rank-order correlation. Preliminary analysis showed the relationship to be monotonic as seen by scatterplot. Each domain and the grade level correlation to "high risk" (PSC-Y total score of 30 or above or answering "yes" to two specific questions) had weak correlations with grade level and were not statistically significant. The PSC-Y scale score had a weak correlation, $r_s(91) = .24$, $p = .02$, and was statistically significant as seen in Table 9. Higher grade levels were associated with higher PSC-Y scores.

Table 9

Spearman rho Results: PSC-Y and Grade Level Correlations

	Internalizing	Externalizing	Attention	Sum	High Risk
r_s	0.20	0.15	0.13	0.24	-0.18
Strength of r_s	Weak	Very weak	Very weak	Weak	Very weak
p	0.05	0.17	0.20	0.02*	0.54

**Correlation significant at alpha < .05*

Life satisfaction and peer relationships.

The association between grade level and life satisfaction, including peer relationships was determined by a Spearman's rank-order correlation. Preliminary analysis showed the relationship to be monotonic as seen by scatterplot. Table 10 illustrated individual domain results. The scale score of MSLSS also had a statistically significant, weak negative association with grade level, $r_s(91) = -.34$, $p = .001$.

Grade level comparisons were categorized by middle school (MS, 8th grade); early high school (Early HS, 9th grade); and high school (HS, 11th and 12th grade). MSLSS mean scores for each domain were calculated through descriptive statistics and exhibited in Figure 8. MSLSS scale score means were MS, $M = 196.63$ ($SD = 29.42$); Early HS, $M = 189.00$ ($SD = 30.64$); and HS, $M = 176.26$ ($SD = 28.44$) as depicted in Figure 9.

Table 10

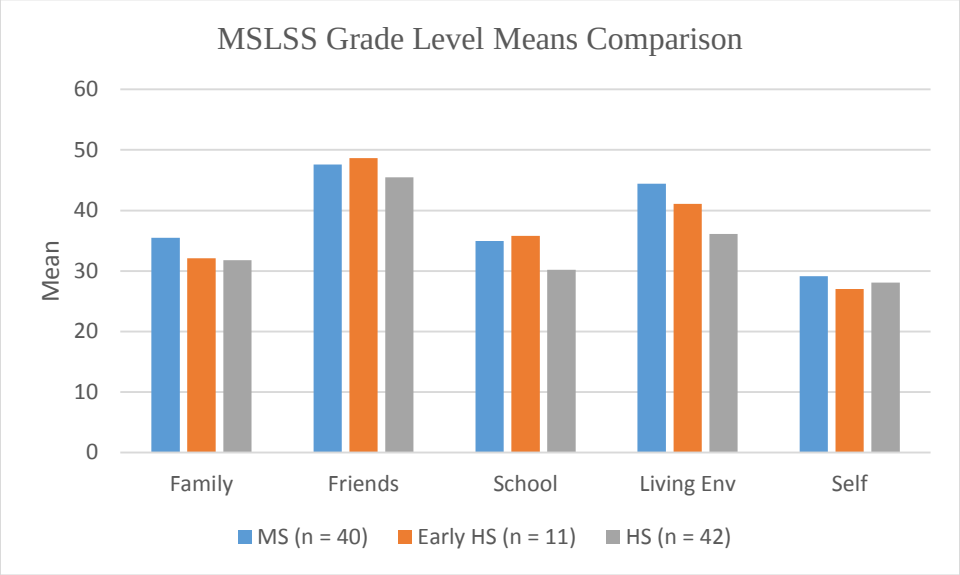
Spearman rho Results: MSLSS and Grade Level Correlations

	Family	Friends	School	Living Env.	Self	Sum Total
r_s	-.31**	-.23*	-.25*	-.44**	0.14	-.34**
Strength of r_s	weak	weak	weak	moderate	very weak	weak
p	0.003	0.02	0.02	0.0005	0.20	0.001

**Correlation significant at alpha < .05* ***Correlation significant at alpha < .01*

Figure 8

Comparison of MSLSS Means Across Grade Levels

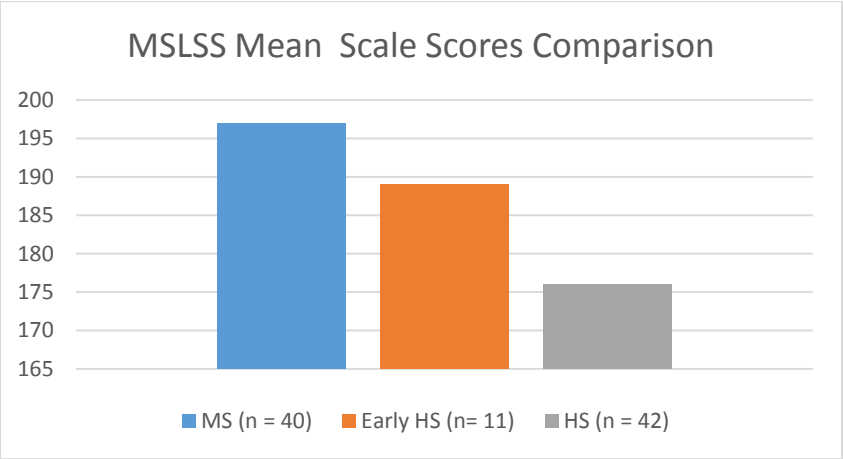


To further explore the means between grade levels and MSLSS, a one-way ANOVA was conducted. A one-way ANOVA, with post-hoc testing can distinguish differences between two or more means (Laerd Statistics, 2015). Each domain contained no significant outliers as seen by boxplots. Early high school and high school had normal distribution as evidenced by Shapiro-

Wilk's test, $p > .05$. Middle school did not meet the requirement of Shapiro-Wilk's test, $p < .001$.

Figure 9

MSLSS Scale Score Means Comparison Across Grade Levels



Middle school was included in continued analysis as the ANOVA is capable of continuing to give a robust analysis with non-normality data and does not usually affect Type I error in any great margin (Laerd Statistics, 2015). MSLSS scale score and its domains, except friends, (p = .011), met the assumption of homogeneity as calculated by Levene's test for equality of variances. There was no statistically significant differences in friends and grade levels after completion of Welch's ANOVA, $F(2,48.23) = 2.54$, $p = .09$. ANOVA results included statistically significant results between MSLSS scale score and grade levels, $F(2,90) = 5.06$, $p = .08$; school and grade levels, $F(2,90) = 1.26$, $p = .02$; and living environment, $F(2,90) = 9.73$, $p < .0005$. Results were not statistically significant for differences between family and grade levels, $F(2,90) = 2.57$, $p = .08$; and self, $F(2,90) = .98$, $p = .38$.

Tukey HSD reported three statistically significant associations between MSLSS and middle school and high school. Early high school had no statistically significant association with either grade level in any of the MSLSS domains. Three significant findings displayed in Figure

10a – 10c were: (a) a decrease in MSLSS scale score from middle school, (M = 196.63, SD = 29.42), to high school (M = 176.26, SD = 28.44), with a mean decrease of 20.36. Through Tukey HSD post hoc analyses, the decrease was statistically significant (p = .007) (6.43, 95% CI (5.03 to 35.69)); (b) a decrease in school score from middle school, (M = 34.93, SD = 7.14), to high school (M = 30.21, SD = 9.54), with a mean decrease of 4.71. Through Tukey post hoc analyses, the decrease was statistically significant (p = .030) (1.82, 95% CI (0.37 to 9.06)); and (c) a decrease in living environment score from middle school (M = 44.40, SD = 77.67), to high school (M = 36.10, SD = 9.13), with a mean decrease of 8.31. Through Tukey post hoc analyses, the decrease was statistically significant (p < .0005) (1.89, 95% CI (3.80 to 12.81)). The complete Tukey HSD matrix is located in Appendix T.

Grade levels and school functioning variables.

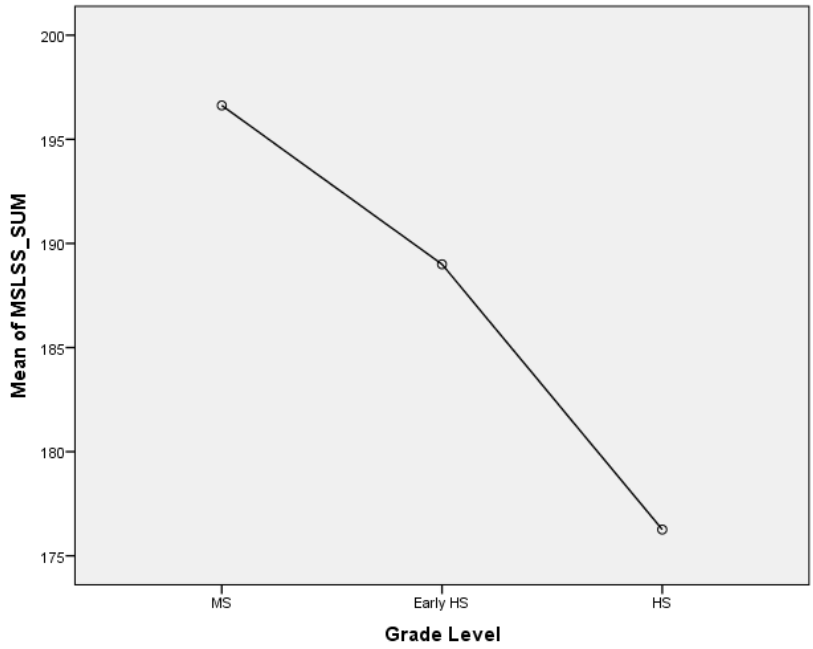
Student ability beliefs and subjective task values.

A Spearman's rank-order correlation was run to determine the association between grade level and student's ability beliefs and subjective task values as a measure of their motivation in each of the six categories. Initial analysis displayed the relationships of each domain to be monotonic as assessed by scatterplots, with several examples shown in Figure 11a – 11b. Both attainment value and extrinsic utility value had weak, statistically significant negative correlations with grade level. As adolescents progress through secondary school, lack of reaching their long or short-term goals (extrinsic utility value) may be associated with loss of interest in the activity. The results are listed in Table 11.

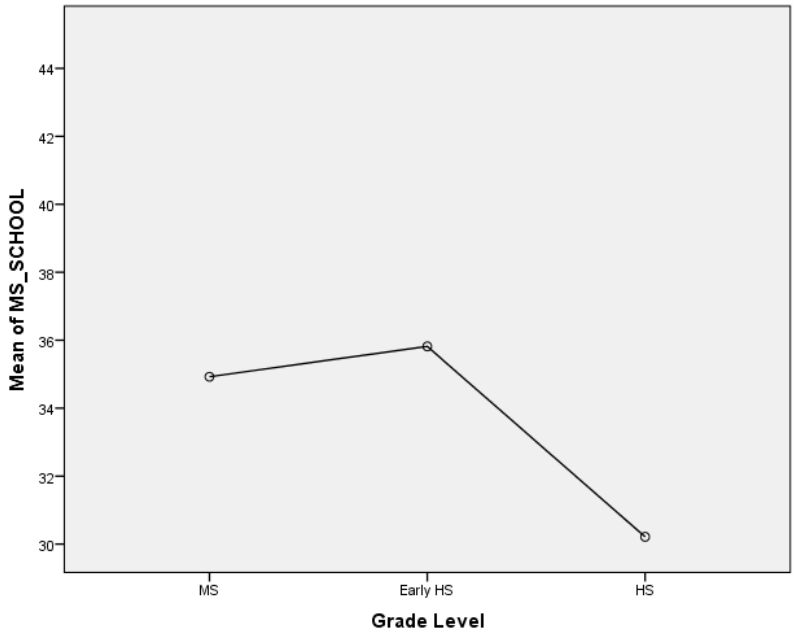
Figure 10a

One-way ANOVA MSLSS Scale, School, and Living Environment

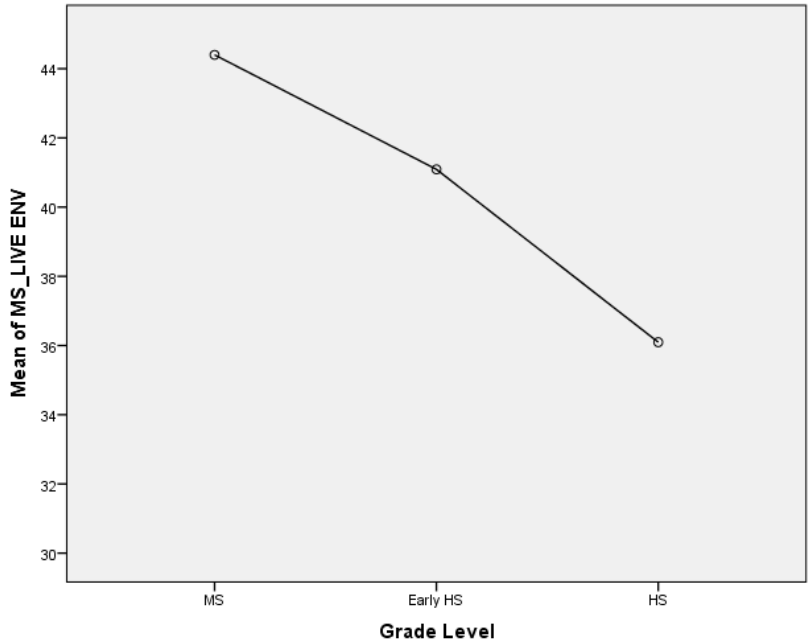
10a) MSLSS Scale Score



10b) MSLSS School Domain



10c) MSLSS Living Environment Domain



School climate perception.

To determine the relationship between grade level and students' school climate perception, a Spearman's rank-order correlation was conducted. The four domains of school climate included: emotional environment, student relationships, teaching and learning, and parent support. Initial analysis displayed the relationships of each domain to be monotonic as assessed by scatterplots. Table 12 illustrates the results. The strongest negative relationships with grade level, emotional environment and parent support were both statistically significant at $p < .01$. Each school climate domain had a weak to very weak, negative correlation to grade level.

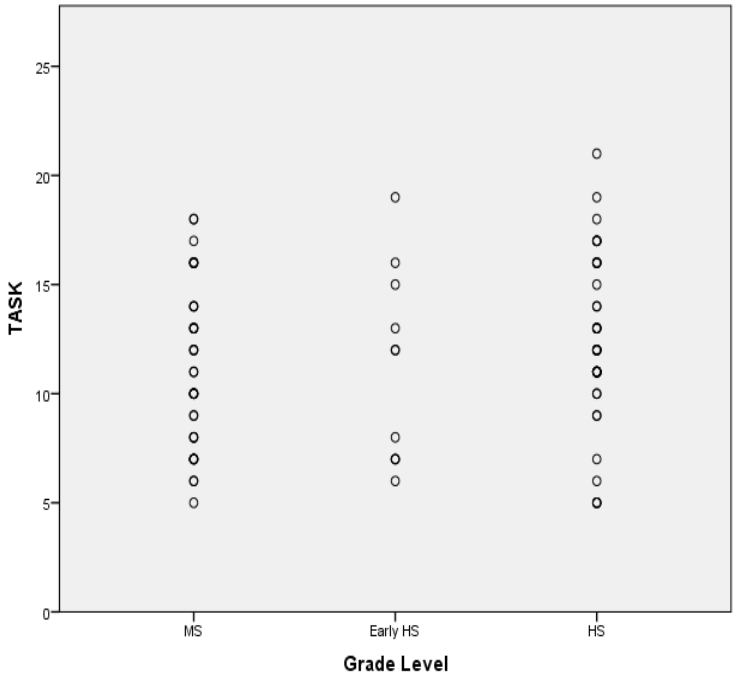
Academic achievement: Grade level, GPA and attendance.

A Spearman's rank-order correlation was run to determine the association between grade level and grade point average (GPA). Figure 12 shows the monotonic relationship between variables. Grade level was clustered towards the GPA scale of 4.0 (8th and 9th grades) and 5.0

Figures 11a – 11b

Examples of Monotonic Relationships

11a) Grade Level and Task Monotonic Relationship



11b) Grade Level and Ability/Expectancy Monotonic Relationship

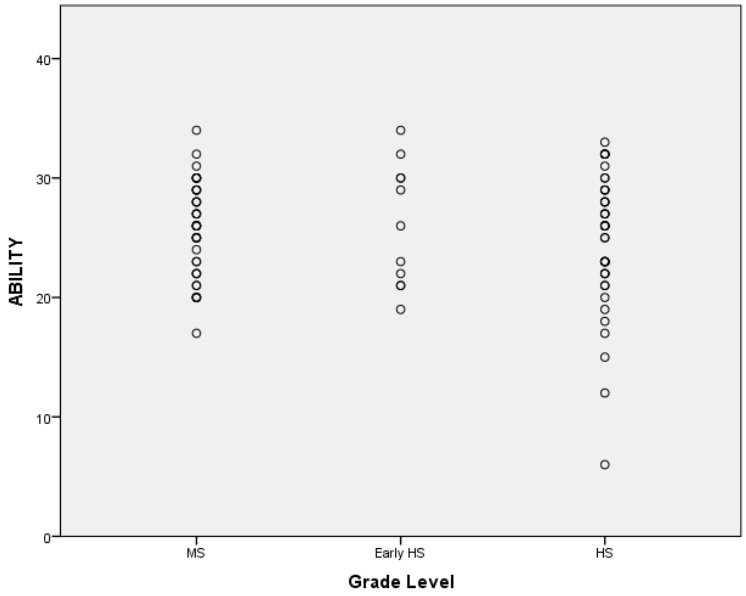


Table 11

Correlation Coefficients of Student Beliefs & Values

Student Ability Beliefs & Subjective Task Values: Correlation Coefficients

	Ability/Expectancy	Task Difficulty	Required Effort	Intrinsic	Attainment	Extrinsic
r_s	-0.07	0.15	0.05	-0.11	-0.25*	-0.21*
Strength of r_s	*very weak*	*very weak*	*very weak*	*very weak*	*weak*	*weak*
p	0.52	0.14	0.64	0.31	0.01	0.04
r_s^2	0.00	0.02	0.00	0.01	0.06	0.04

**Correlation significant at alpha < .05* ***Correlation significant at alpha < .01*

(high school, 11th and 12th grade). The combined variable, MS_Early HS GPA, had a very weak negative relationship to grade level, $r_s(49) = -.16$, $p = .22$, while HS GPA showed a very weak positive relationship to grade level, $r_s(39) = .10$, $p = .55$, with neither variable having statistical significance.

Table 12

School Climate Correlation Coefficients: Grade Level

	Emotional Env.	Student Rel.	Teaching/Learning	Parent Support
r_s	-0.32**	-0.16	0.12	-0.38**
Strength of r_s	*weak*	*very weak*	*very weak*	*weak*
p	0.002	0.13	0.27	0.00
r_s^2	0.08	0.00	0.00	0.03

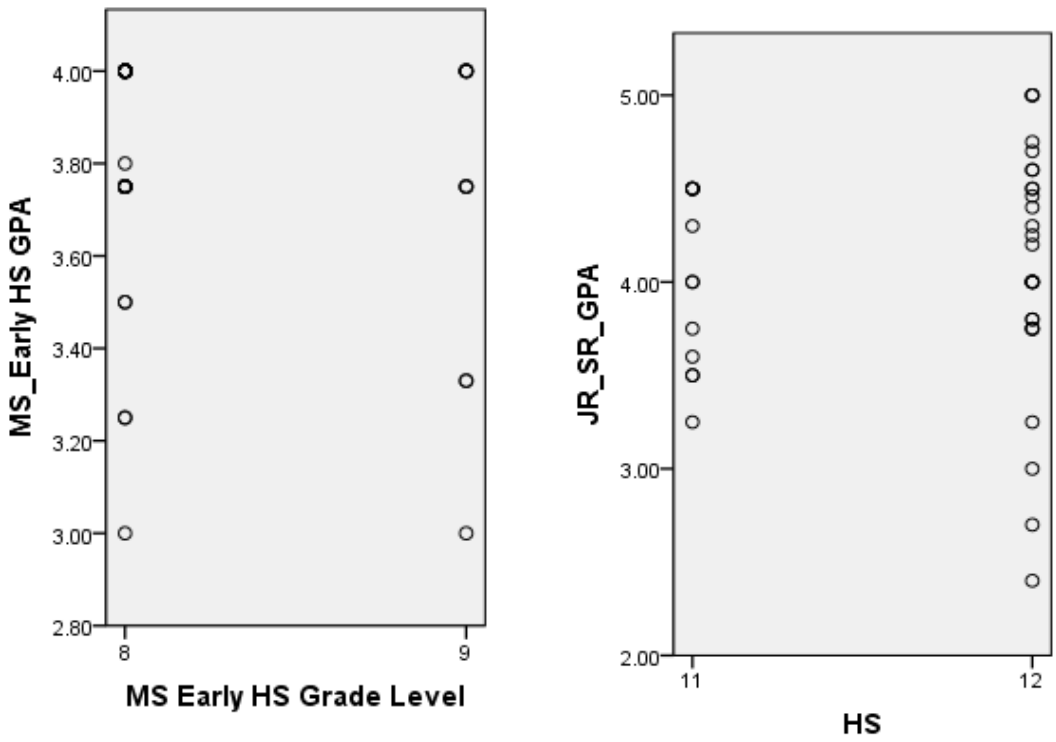
**Correlation significant at alpha < .05* ***Correlation significant at alpha < .01*

The combined variable of MS_Early HS grade level was also compared with MS_Early HS attendance and HS grade level compared to HS attendance. A monotonic relationship was observed by scatterplot with both grade level variables and a Spearman's rank-order correlation

was run. Both grade level variables had a very weak, negative correlation with grade level, MS_Early HS, $r_s(49) = -.19$, $p = .19$, HS, $r_s(39) = -.12$.

Figure 12

Scatterplots of Grade Level Monotonic Relationship with GPA



Number of ALP classes and psychosocial functioning variables.

Stress.

The PSS-6 was compared to the number of ALP classes to determine the relationship between stress and increased rigorous studies. A Spearman's rank-order correlation was run after viewing a monotonic relationship between variables as seen by scatterplot. PSS-6, $r_s(91) = .13$, $p = .21$ had a very weak, non-statistically signifcant positive correlation to the number of ALP classes a student participated in.

Psychological indicators: Internalizing and externalizing behaviors.

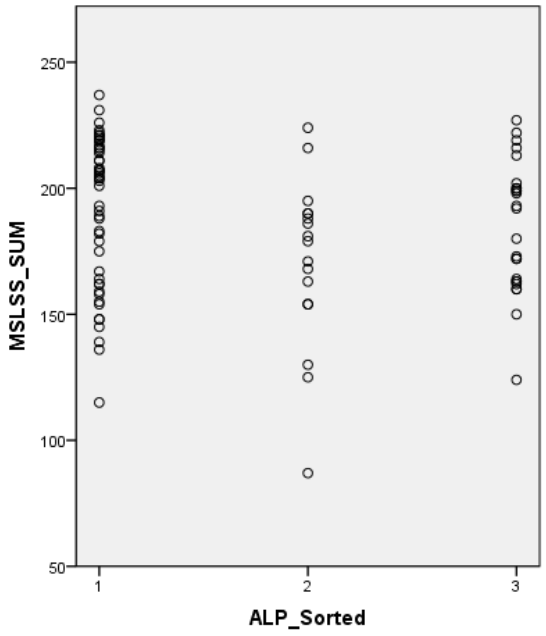
The PSC-Y measures psychological factors that may be indicative of mental health issues. After viewing a monotonic relationship among variables, the Spearman's rank-order correlation was run comparing PSC-Y to number of ALP classes. PSC-Y and number of ALP classes had a very weak, not statistically significant positive correlation in each domain. This relationship changed to a moderate, negative relationship, $r_s(91) = -.44$, $p = .12$, when associating the number of classes with high risk PSC-Y. The high risk PSC-Y are those students who scored ≥ 30 on the PSC-Y or answered "yes" to having thoughts about suicide or had attempted suicide.

Life satisfaction and peer relationships.

The MSLSS (Tss = 240) measures one's life satisfaction and includes the domains: family, friends, school, living environment, and self. The higher the score, the greater life satisfaction one enjoys. A Spearman's rank-order correlation was run and Figure 13 shows the monotonic relationship between variables. No statistically significant results were obtained.

Figure 13

MSLSS and Number of Classes Monotonic Relationship Scatterplot



family, r_s (91) = -.18, p = .09; friends, r_s (91) = -.13, p = .23; school, r_s (91) = -.10, p = .35; and living environment, r_s (91) = -.18, p = .09 had very weak, negative relationships to the number of ALP classes. Self, r_s (91) = -.20, p = .05, had the strongest relationship to the number of ALP classes, having a weak, negative but not statistically significant relationship to the number of classes, while the MSLSS score, r_s (91) = -.19, p = .08, had a very weak, negative relationship.

Number of ALP classes and school functioning variables.

Student ability beliefs and subjective task values.

A Spearman's rank-order correlation was run to determine the association between students' motivation (ability beliefs and subjective task values) and the number of ALP classes they participated in. A monotonic relationship was viewed by scatterplot. Each domain resulted in a very weak to negligible, positive or negative correlation without statistical significance, as viewed in Table 13.

Table 13

Student Motivation and Number of ALP Classes: Correlation Coefficients

n = 93	Ability/Expectancy	Task Difficulty	Required Effort	Intrinsic	Attainment	Extrinsic
r_s	.10	.05	-.01	.09	.04	-.03
Strength of r_s	*very weak*	*very weak*	*very weak*	*very weak*	*very weak*	*very weak*
p	.35	.65	.91	.94	.67	.78
r_s^2	.01	.003	.0001	.0001	.002	.001

School climate perception.

Spearman's rank-order correlations were run for each domain of school climate. Monotonic relationships with the number of ALP classes occurred in each of the domains as seen

by scatterplot. Table 14 shows the results of the correlations, with emotional environment having a statistically significant and weak, negative relationship with number of ALP classes.

Table 14

School Climate Correlation Coefficients: Number of ALP Classes

n = 93	Emotional Env.	Student Rel.	Teaching/Learning	Parent Support
r_s	-.29**	.05	.04	-.16
Strength of r_s	*weak*	*very weak*	*very weak*	*very weak*
p	.005	.60	.71	.13
r_s^2	.08	.003	.02	.02

***Correlation significant at alpha < .01*

Academic achievement: GPA and attendance.

A Spearman's rank-order correlation was run to determine the association between the number of ALP classes students participated in their first semester of the 2016-2017 school year and grade point average (GPA). Scatterplots verify the monotonic relationship between variables. The student samples' GPA, r_s (90) = -.35, p = .001, was a weak, statistically significant positive relationship with number of ALP classes. As individual groups, middle school, r_s (49) = -.14, p = .34, had a very weak, negative correlation to the number of classes; early HS, r_s (9) = .22, p = .51, had a weak positive relationship; and HS, r_s (39) = .47, p = .002, had a statistically significant, positive moderate relationship with the number of ALP classes. As seen in Table 15, the individual groups are further compared by descriptive statistics by GPA, attendance and the number of ALP classes.

A Spearman's rank-order correlation was run to determine the strength of association between the number of ALP classes and attendance. Monotonic relationship between the variables was confirmed by scatterplot. The entire sample's attendance relationship to the number of ALP classes was very weak and negatively associated, r_s (92) = -.15, p = .19. The

Table 15

GPA, Attendance, and ALP Classes Descriptive Statistics

	MS_Early HS GPA[1]	High School GPA[1]	MS_Early HS Attendance	High School Attendance	MS_Early HS ALP Classes	High School ALP Classes
n	51	41	51	41	51	41
Mean	3.82	4.07	1.78	2.15	1.3	2.2
Median	4.00	4.00	1.30	1.20	1.00	2.00
Mode	4.00	4[a]	0	0	1	3
SD	0.27	0.60	1.89	2.93	0.68	0.81

1. MS_Early HS GPA Scale = 4.0, HS GPA Scale = 5.0
a. Multiple modes exist. The smallest value is shown.

MS_early HS combined variable, r_s (51) = -.11, p = .45, and HS, r_s (41) = -.24, p = .06, were also negatively correlated to the number of ALP. Comprehensive tables showing descriptive statistics between the number of ALP classes, grade level, gender, and age can be found in Appendix R.

Question 3: The relationship between the psychosocial adjustment of students enrolled in ALPs by gender.

Gender and psychosocial functioning variables.

Stress.

A rank-biserial correlation was conducted between gender and PSS-6 score after failing to meet the assumption of homogeneity of variances, $p < .05$. There was a monotonic relationship between the variables. There was no statistically significant correlation between gender and PSS-6 score, $r_{rb}(91) = .16$, $p = .14$, with female PSS-6 score (M = 13.25, *SD* = 5.80) higher than male PSS-6 score (*M* = 11.44, *SD* = 4.24). Gender accounted for 2.4% of the variability in PSS-6 scores.

Psychological indicators: Internalizing and externalizing behaviors.

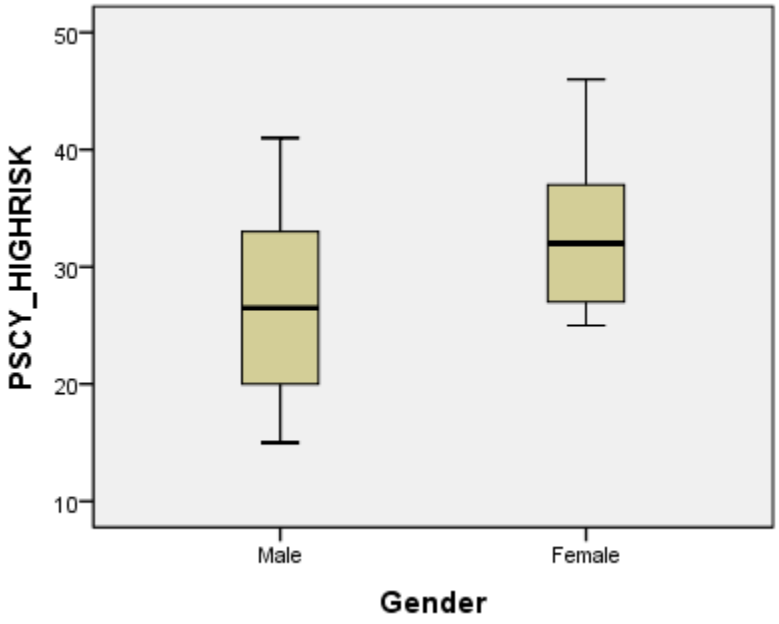
Rank-biserial correlations were conducted between gender and the internalizing, externalizing, and attention problem factors of the PSC-Y. As evidenced by scatterplot, a monotonic relationship existed between variables. There was a very weak, and no statistically significant correlation between gender and PSC-Y internalizing behavior score, $r_{rb}(91) = .17$, $p = .10$, with female PSC-Y internalizing problem score, $M = 4.19$ ($SD = 3.15$) higher than male PSC-Y internalizing behavior score ($M = 3.00$ ($SD = 2.44$). Gender accounted for 2.9% of the variability in PSC-Y internalizing behavior scores. There was a very weak correlation, and no statistically significant correlation between gender and PSC-Y externalizing behavior score, $r_{rb}(91) = .17$, $p = .10$, with male PSC-Y externalizing problem score, $M = 1.78$ ($SD = 1.57$) higher than female PSC-Y externalizing behavior score, $M = 1.53$ ($SD = 2.32$). Gender accounted for 2.9% of the variability in PSC-Y externalizing behavior scores. There was no statistically significant, very weak correlation between gender and PSC-Y attention behavior score, $r_{rb}(91) = .10$, $p = .33$, with male PSC-Y attention problem score slightly elevated over female, $M = 4.02$ ($SD = 2.34$) versus $M = 3.96$ ($SD = 2.47$). Gender accounted for 2.9% of the variability in PSC-Y attention behavior scores. Overall, the sum PSC-Y score, $r_{pb}(91) = .12$, $p = .27$, had a weak, positive relationship with gender.

The point-biserial correlation was conducted between gender and PSC-Y HR score (scores > 30 or answered “yes” to “During the past three months, have you thought of killing yourself?” or “Have you tried to kill yourself?”). Of the 93 adolescents surveyed, 15% (six males and eight females) were deemed high risk for mental health problems (PSC-Y HR). Preliminary analyses illustrated (a) no outliers as evidenced by boxplots in Figure 14; (b) PSC-Y HR score was normally distributed as measured by Shapiro-Wilk’s test, ($p > .05$); and (c) there was

homogeneity of variances for PSC-Y HR score as evidenced by Levene's test for equality of variances, p = .68. There was no statistically significant, but weak correlation

Figure 14

Boxplots: Checking for Outliers



between gender and PSC-Y HR score, $r_{pb}(12)$ = .36, p = .20, with female PSC-Y HR score, M = 32.88 (SD = 7.08) higher than male PSC-Y HR score, M = 27.00 (SD = 9.23). Gender accounted for 13.2% of the variability in PSC-Y HR scores.

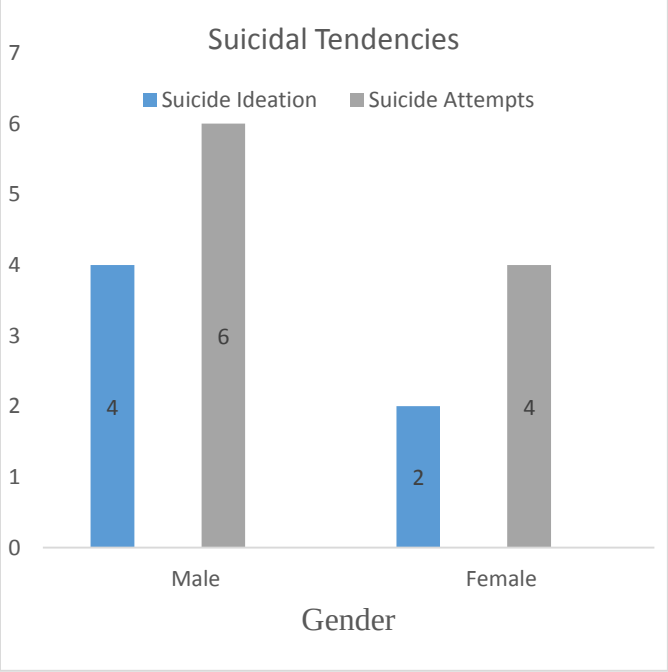
According to the Centers for Disease Control & Prevention (2016), in 2014, death by suicide in the United States in 2014, was completed by 17% of the youth population, aged 10-24 years. Detailed plans in how to complete suicide were created by 14.6% of students, 17.7% of students had suicidal ideation, and 8.6% of students attempted suicide at least once. This study's adolescents' suicidal tendencies by age and gender list is located in Appendix P.

The Fisher's exact test was run for gender responses to the two items associated with suicidal behavior, "During the past three months, have you thought of killing yourself?" or

"Have you tried to kill yourself?". The first question, "During the past three months, have you thought of killing yourself?", 36 males participated in the study and 4 (11.1%) selected "yes" to the question. Similarly, females, 6 (10.5%) also experienced suicidal ideation. Two (5.6%) males and 4 (4.7%) females responded positively to the question, "Have you tried to kill yourself?". There was no statistically significant association between gender and suicidal ideation or gender and attempted suicide as assessed by Fisher's exact test, $p > .05$. Results are summarized in Figure 15.

Figure 15

Student Suicidal Ideation and Attempts by Gender



Life satisfaction and peer relationships.

Life satisfaction was assessed by the 40-item Multidimensional Students' Life Satisfaction Scale (MSLSS) and includes the categories: family, friends (peer relationships), school, living environment, and self. Higher scores reveal higher life satisfaction. Each domain

was evaluated by non-parametric rank-biserial correlation due to violation of normality, as measured by Shapiro-Wilk's test, p <.05 in at least one gender calculation of each domain as shown in Table 16. Each domain had a monotonic relationship with the gender variable. There were very weak and no statistically significant correlations between gender and each factor: family, $r_{rb}(91) = .06$, $p = .57$; friends, $r_{rb}(91) = .01$, $p = .89$; school, $r_{rb}(91) = .02$, $p = .88$; living environment, $r_{rb}(91) = .07$, $p = .50$; and self, $r_{rb}(91) = .01$, $p = .94$. Gender mean values in each

Table 16

Testing for Normality: MSLSS Factors

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	df	Sig.
MS_FAMILY	Male	.175	36	.007	.847	36	.000
	Female	.156	57	.001	.854	57	.000
MS_FRIENDS	Male	.131	36	.119	.911	36	.007
	Female	.182	57	.000	.837	57	.000
MS_SCHOOL	Male	.126	36	.161	.944	36	.068
	Female	.093	57	.200*	.952	57	.023
MS_LIVE ENV	Male	.141	36	.067	.941	36	.056
	Female	.167	57	.000	.931	57	.003
MS_SELF	Male	.104	36	.200*	.963	36	.267
	Female	.137	57	.009	.927	57	.002

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Gender mean values in each domain was similar as illustrated in Table 17. Gender accounted for less than 0.5% of the variability in each domain of the MSLSS.

Table 17

Mean Values and Standard Deviations: MSLSS Domains

MSLSS Domain	Gender	*M*	*SD*
Family	Male	33.36	7.11
	Female	33.44	8.38
Friends	Male	47.14	6.13
	Female	46.53	8.09
School	Male	32.97	8.54
	Female	32.86	8.60
Living Environment	Male	39.72	8.77
	Female	40.60	9.73
Self	Male	28.67	4.06
	Female	28.23	5.41

n = 36 males, 57 females

MSLSS elicited a scale score (Tss = 240). A rank-biserial correlation was conducted between gender and MSLSS scale score. A scatterplot demonstrated illustrated a monotonic relationship between variables. There was no statistically significant and a very weak to negligible correlation between gender and MSLSS scale score, $r_{rb}(91) = .003$, $p = .75$, with male MSLSS scale score, $M = 186.58$ ($SD = 26.05$) and female MSLSS scale score, $M = 186.49$ ($SD = 33.03$) similar. Gender accounted for 0% of the variability in MSLSS scale score.

Gender and school functioning variables.

Student ability beliefs and subjective task values.

Rank-biserial correlations were used to evaluate each domain of students' beliefs and values. Scatterplots illustrated a monotonic relationship between each variable and gender. Table 18 shows the results of each domain's rank-biserial correlation, mean, standard deviation, and coefficient of determination. Gender had a statistically significant, weak relationship with extrinsic value, r_{rb} (91) = .25, p = .02, with males having a higher correlation to extrinsic value than females and gender accounting for 2% variability in extrinsic value.

School climate perception.

Each of the categories except parent support were assessed by point-biserial correlations. Rank-biserial correlation was used with parent support due to the violation of normality.

Table 18

Rank-biserial Correlations of Gender and Student Motivation

n = 93		Ability/ Expectancy	Task Difficulty	Required Effort	Intrinsic Value	Attainment Value	Extrinsic Value
	r_{rb}	-.15	.10	.11	-.11	-.15	-.25*
		Strength of correlations are +/- very weak					*weak*
	r_{rb}^2	.02	.01	.01	.01	.02	.06
Male	*M*	5.27	3.73	4.51	4.65	5.77	4.74
	SD	.78	1.16	1.47	1.41	1.00	1.46
Female	*M*	4.92	4.01	4.78	4.38	5.42	4.00
	SD	1.09	1.34	1.41	1.30	1.20	1.48

**Correlation significant at alpha < .05*

Preliminary analyses between gender and emotional environment indicated (a) no extreme outliers as evidenced by boxplots; (b) both genders met the assumption of normal distribution as measured by Shapiro-Wilk's test, $p = .70$ (male), $p = .66$ (female); and (c) did meet the assumption of homogeneity of variances as evidenced by Levene's test for equality of variances, $p = .90$. There was a very weak, not statistically significant correlation between gender and emotional environment, $r_{pb}(91) = .08$, $p = .94$, with both genders perceiving the emotional environment equally (males, $M = 3.41$ ($SD = .38$); females, $M = 3.41$ ($SD = .36$)). Gender accounted for 0% of the variability in required effort.

Preliminary analyses between gender and student relationship indicated (a) no extreme outliers as evidenced by boxplots; (b) both genders met the assumption of normal distribution as measured by Shapiro-Wilk's test, $p = .38$ (male), $p = .124$ (female); and (c) did meet the assumption of homogeneity of variances as evidenced by Levene's test for equality of variances, $p = .63$. There was a very weak, not statistically significant correlation between gender and student relationship, $r_{pb}(91) = .10$, $p = .37$, with females, $M = 2.93$ ($SD = .54$) perceiving student relationship more than males, $M = 2.82$ ($SD = .58$). Gender accounted for .01% of the variability in required effort.

Preliminary analyses between gender and teaching and learning indicated (a) no extreme outliers as evidenced by boxplots; (b) both genders met the assumption of normal distribution as measured by Shapiro-Wilk's test, $p = .68$ (male), $p = .26$ (female); and (c) did meet the assumption of homogeneity of variances as evidenced by Levene's test for equality of variances, $p = .38$. There was a very weak, not statistically significant correlation between gender and teaching and learning, $r_{pb}(91) = .15$, $p = .14$, with males, $M = 3.92$ ($SD = .48$), viewing teaching

and learning higher than females, M = 3.75 (SD = .60). Gender accounted for 2.4% of the variability in teaching and learning.

A Rank-biserial correlation was run between gender and parent support. The variables had a monotonic relationship as seen by scatterplot. There was a very weak, not statistically significant correlation between gender and parent support, $r_{rb}(91) = .07$, $p = .50$, with males, M = 4.56 (SD = .61) perceiving parent support more slightly more strongly than females, M = 4.47 (SD = .69). Gender accounted for .01% of the variability in parent support.

Academic achievement: GPA and attendance.

Middle school GPA and gender association was computed by rank-biserial correlation. The variables had a monotonic relationship as seen by scatterplot. There was a very weak, not statistically significant correlation between gender and MS GPA, $r_{rb}(38) = .06$, $p = .72$, with males' GPA, M = 3.88 (SD = .19) slightly achieving higher GPAs than females, M = 3.83 (SD = .29). Gender accounted for .01% of the variability in MS GPA.

Early high school GPA and gender association was computed by rank-biserial correlation. A monotonic relationship between variables was seen by scatterplot. There was a moderate, not statistically significant correlation between gender and early high school GPA, $r_{rb}(9) = .46$, $p = .16$, with females' GPA, M = 3.85 (SD = .27) achieving slightly higher than males, M = 3.57 (SD = .40). Gender accounted for 21.2 % of the variability in early high school GPA.

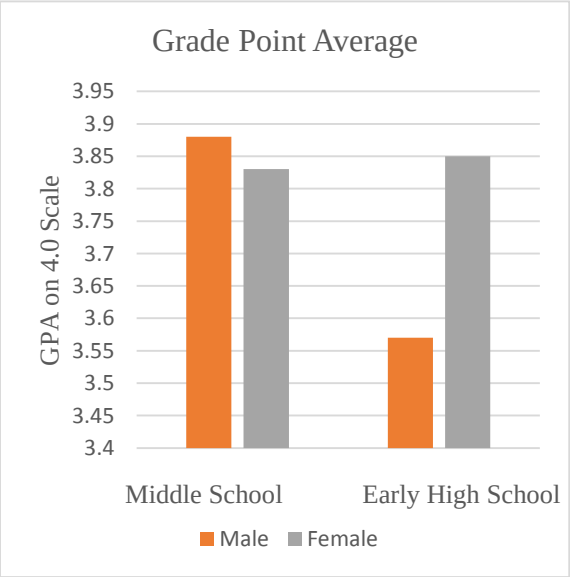
High school GPA and gender association was calculated by point-biserial correlation. Previous to calculation, one student was removed as an extreme outlier, having a 0.0 GPA and thirty absences. It was concluded that the student's GPA did not represent the population being studied and was thus eliminated. Preliminary analyses between gender and high school GPA

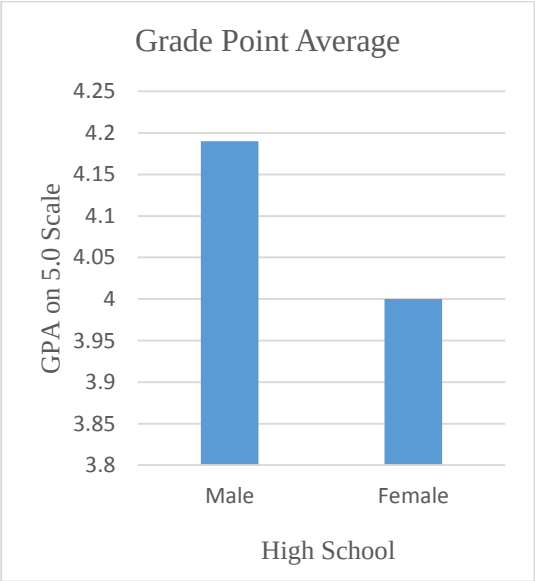
indicated (a) no outliers as evidenced by boxplots; (b) both genders met the assumption of normal distribution as measured by Shapiro-Wilk's test, p = .08 (male), p = .15 (female); and (c) met the assumption of homogeneity of variances as evidenced by Levene's test for equality of variances, p = .22. There was a very weak, not statistically significant correlation between gender and high school GPA, $r_{pb}(39) = .16$, p = .32, with males' GPA, M = 4.19 (SD = .72) outscoring females, M = 4.00 (SD = .53). Gender accounted for 2.6% of the variability in early high school GPA. Figure 16 summarizes the correlation between gender and grade point averages in middle school, early high school and high school.

The association between gender and attendance was computed by rank-biserial correlation and the relationship was monotonic as seen by scatterplot. There was a very weak, not statistically significant correlation between gender and attendance, $r_{rb}(91) = .13$, p = .22, with females, M = 2.53 (SD = 4.11) absent from school more than males, M = 1.79 (SD = 2.64). Gender accounted for 1.6 % of the variability in attendance.

Figure 16

Middle School, Early High School and High School GPA Comparison by Gender





Question 4: Coping strategies used by students enrolled in ALP classes.

To determine which of the four categories of coping strategies were being used by students in ALPs, central tendencies were derived for each category. Each category of coping (Negative Avoidance, Positive Appraisal, Family, and Anger) were examined by the three independent variables: the number of ALP classes, gender, and grade level. Means, standard deviations, and medians are depicted in Table 19. Observations of the means include: (a) positive appraisal approach decreased as class enrollment in ALP classes increased: one class (*M* = 19.37), two classes (*M* = 16.94) and made a slight increase with three or more classes (*M* = 17.36); (b) 8th grade males and females taking one ALP class had the highest use of positive appraisal approach; (c) positive appraisal approach decreased as a use of coping strategy as the grade level increased (*M* = 19.55 (8th grade), *M* = 18.18 (early High School/9th grade), and *M* = 17.33 (High School)) while use of the anger approach increased from middle school to high school grade (*M* = 16.60, 17.55, and 17.10 respectively); and (d) coping through family communication decreased after early high school, *M* = 18.20 (8th), *M* = 18.64 (early HS), *M* = 15.67 (HS).

The degree of variance is reported in Table 20 or each coping strategy approach with smaller variances indicating more data scores near the mean (Creswell, 2015). Negative avoidance, ("use drugs not prescribed by your doctor", smoke, and drink beer, wine, liquor") strategy domain's Tds = 20 where the other three domains' Tds = 25. Its smaller deviation is related to more scores being closer to the mean. Due to the smaller Tds of negative avoidance, descriptive statistics when compared to the three other domains can be deceiving.

Table 19

Coping Strategies of Adolescents in Accelerated Learning Programs

		Negative Avoidance	Positive Appraisal	Family	Anger
(IV)	*n*	*M (SD) /Mdn*	*M (SD) /Mdn*	*M (SD) /Mdn*	*M (SD) /Mdn*
ALP					
1 class	51	17.53 (1.90) /17	19.37 (3.36) /20	17.94 (4.16) /19	16.75 (2.51) /17
2 classes	17	16.94 (1.68) /16	16.94 (4.25) /16	16.12 (3.22) /16	17.82 (2.58) /18
3 classes	25	16.52 (2.08) /16	17.36 (3.26) /18	16.08 (4.60) /17	16.72 (2.32) /16
Gender					
Male	36	17.36 (2.32) /16.5	18.03 (3.42) /18	16.67 (4.47) /18.5	17.17 (2.22) /17
Female	57	17.02 (1.67) /16	18.61 (3.79) /18	17.39 (4.04) /17	16.79 (2.64) /17
Grade					
Middle School	40	17.60 (1.85) /17	19.55 (3.49) /20	18.20 (4.12) /19	16.60 (2.60) /17
Early HS	11	17.09 (1.58) /16	18.18 (4.40) /18	18.64 (4.30) /20	17.55 (1.75) /17
High School	42	16.74 (2.06) /16	17.33 (3.32) /17.3	15.67 (3.87) /15.5	17.10 (2.54) /17

Table 20

Descriptive Statistics of the Coping Strategies Used by Adolescents in ALPs

	n	Range	Minimum	Maximum	Std. Deviation	Variance
NEGATIVE AVOIDANCE	93	8.00	12.00	20.00	1.95	3.781
POSITIVE APPRAISAL	93	18.00	7.00	25.00	3.64	13.262
FAMILY	93	20.00	5.00	25.00	4.19	17.597
ANGER	93	16.00	8.00	24.00	2.48	6.170

Chapter V

Discussion

Introduction

Stress of students enrolled in AP® and IB® may disrupt the general good mental health that usually correlates with high achievement (Shaunessy-Dedrick et al., 2014). Cumulative stressful events can be damaging to one's ability to cope and process those stressful events (Hoffman, 2016). Coping strategies may act as protective factors against academic stress, but further research to identify other factors that impede or support student success in ALPs is also needed (Shaunessy-Dedrick et al., 2014). This study's research focused on adding to the research regarding students participating in ALP programs such as dual credit and AP®, IB®, and SIP; identifying relationships between psychosocial adjustment variables; and identifying coping strategies students are utilizing. This study's results may bring new insight into the associations of gender, grade level and the number of classes students are enrolled in and how those variables relate to students' psychosocial adjustment.

Summary of Results

Question 1.

What are the relationships between psychosocial adjustment variables of adolescents enrolled in accelerated learning programs? Question 1 was examined through Pearson product-moment correlations and Spearman rank-order correlations based upon normality of data distribution.

This study's sample of 93 students involved in accelerated learning program classes including advanced level classes, dual credit, and AP® classes reported several statistically significant relationships involving stress: (a) moderately, negatively correlated with life

satisfaction; (b) strongly, positively associated with psychological problems; (c) moderate, negative association with coping strategies; and (d) negatively, weakly related to attainment, intrinsic, and extrinsic values. There was also a moderately strong, but not statistically significant association with the positive PSC-Y score that increases the possibility of being at risk of considerable mental health problems, including suicide (TeenScreen Primary Care, 2009). These results support previous studies that have found similar negative correlations between stress and mental health and the risks it poses to adolescents during this transitional time (Suldo, Shaunessy, & Hardesty, 2008; Wiklund et al., 2012).

Stress has been related to negatively impacting school success (Aresenio & Loria, 2014) and that high levels of academic stress may lower academic achievement when involved in increased academic expectations (Kaplan et al, 2005). Perceived stress level had no statistically significant relationship to school achievement, but had two statistically significant, negative associations with the teaching and learning and emotional environment domains of school climate. From students' self-reports, life satisfaction was significant and strongly, negatively associated with stress with stress accounting for 32% of the variability in life satisfaction and 44% variance in psychological indicators, while psychological indicators account for 52% of variance in life satisfaction. This intricate relationship requires further advanced research analysis to determine the amount of influence each variable may have on one another.

There is an abundance of research regarding how feelings of low self-esteem during adolescence can lead to youth having socio-emotional problems (Roeser et al., 2001; Sun & Hui, 2007), increase risk of suicide (Roeser et al., 2000), and create poor beliefs in their academic abilities (Roeser et al., 2001; Sun & Hui, 2007). Conversely, positive self-esteem allows

adolescents to believe in their ability to academically achieve (Bandura et al., 2003: Suldo et al, 2008) and have higher perceived life satisfaction (Huebner et al., 2004).

School functioning was important to understand how it related to the psychosocial well-being of adolescents. Motivation and the value that students place on their goals, their dreams, and the pathway of meeting those goals can provide an understanding to why adolescents can persevere through the rigorous ALPs without significant affect to their self-esteem, stress, satisfaction of life, etc. If a student believes they can succeed, they are more apt to achieve: perceive it to be too difficult or de-value the task and then mastery is less apt to occur (Guo et al., 2014; Xiang et al., 2004). How school functioning relates to psychosocial functioning as a possible protective factor when psychosocial well-being is diminished can be seen in Figure 17.

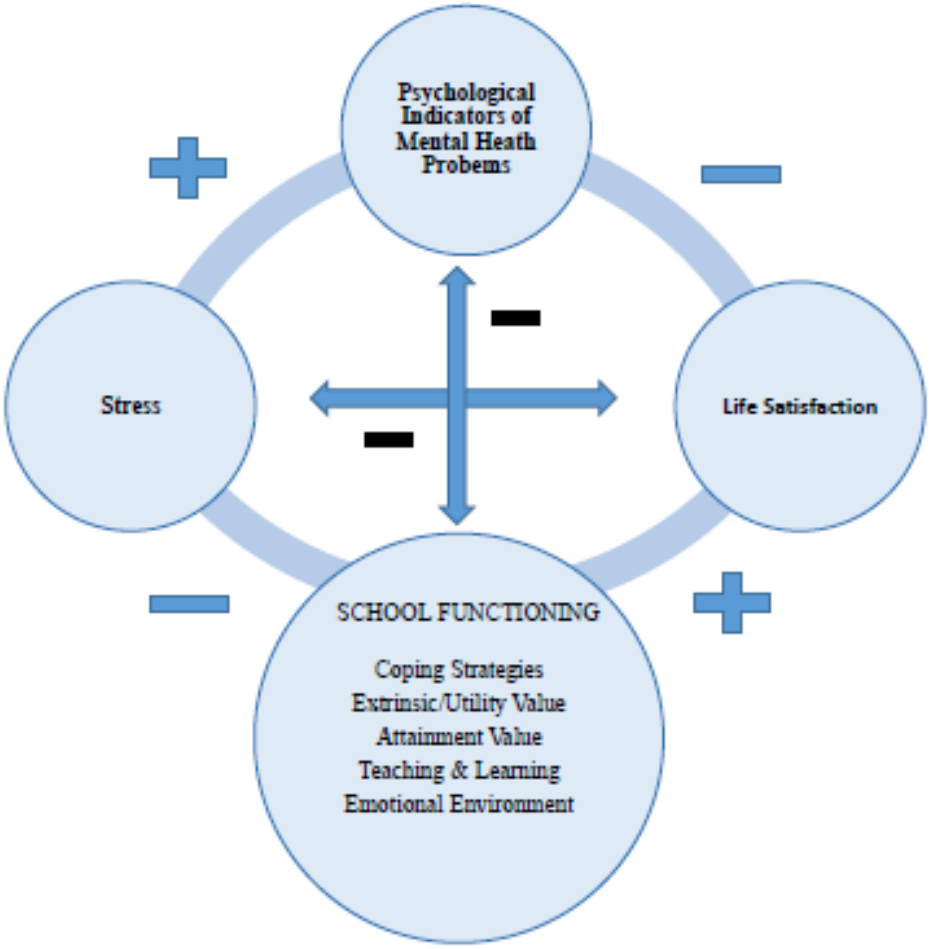
Teacher-student relationships and students' feelings of belongingness have impacted academic achievement, motivation and students' socio-emotional well-being (De Wit et al, 2011; Eccles & Roeser, 2011). This correlation is well represented in motivation and psychosocial well-being by this study's results and displayed in Figure 17. Teacher-student relationships are represented by "Teaching & Learning" in the figure and is:

- moderately associated positively with life satisfaction;
- weakly, negatively associated with attendance;
- strongly, negatively associated with students at high risk of experiencing significant psychological issues or suicide;
- moderately, negatively associated with psychological indicators of mental health issues;
- weakly, negatively associated with perceived stress levels; and
- weakly, positively associated with coping strategies.

This study's findings also support student-teacher relationships influencing life satisfaction, (Suldo et al, 2009), with a moderate, positive association.

Figure 17

Psychosocial Adjustment Variables and Their Similar Relationships

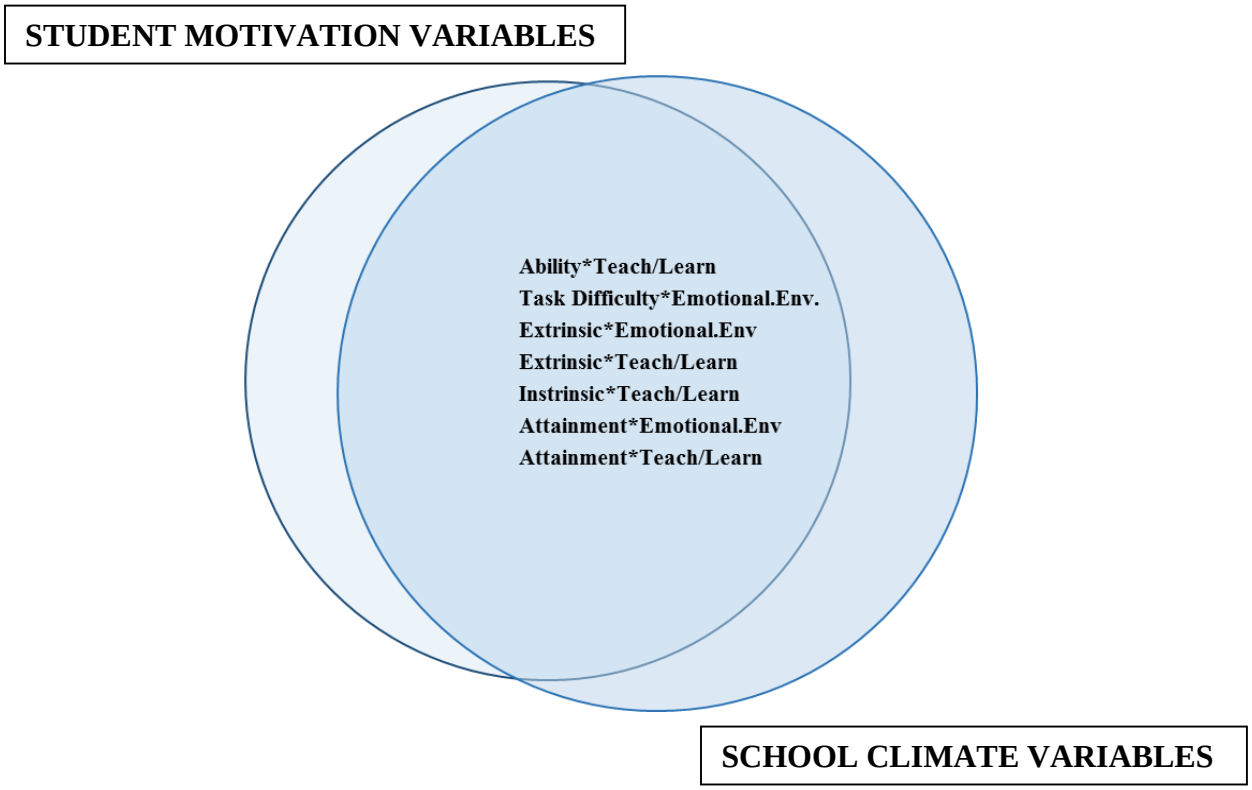


Kirk et al., (2012), asserted that students' aspirations and expectations can be influenced by school climate. Figure 18 shows this relationship between student motivation and school climate. Each of these variable pairings had statistically significant weak, positive correlations with its other variable except for task difficulty. Task difficulty had a statistically significant weak, negative association with emotional environment which may be a meaningful correlation if

students perceive a safe and orderly school environment where supports to them and their peers are available, their sense of difficulty with academic subjects might be mitigated by supportive classes or assistance from peers and teachers that assist them in lessoning the difficulties they are experiencing.

Figure 18

Student Motivation and School Climate Variables



*Note. All relationships significant at $p < .01$ level except task difficulty*emotional environment at $p < .05$.*

Attendance and grade point average are also worth noting in this study's summation. Students engaging in rigorous curriculum, tend to be those who are high-achieving and thus meeting academic standards, (Suldo, Shaunessy, & Hardesty, 2008), such as average or above-average GPA and participating in their studies by being in attendance at school. The sample's mean GPA score was 3.82 (4.0 scale) for middle school and early high school students and 4.07

(5.0 scale) for high school students, representative of exemplary grades. Their days of absence averaged two days in one semester. Attendance was significantly, weakly, and negatively associated with attainment value, teacher and learning, and GPA representative of students who are focused and motivated on achieving their goals through a rigorous academic program.

Question 2.

What is the relationship between the psychosocial adjustment of students in accelerated learning programs by grade level and by the number of accelerated learning program classes? Question 2 sought to understand concepts that the researcher has yet to uncover in the depth of research particular to students participating in ALPs. Students in accelerated learning programs have been found to experience more academic stress, (Suldo, Shaunessy, & Hardesty, 2008), but does taking more ALP classes elicit negative repercussions towards students' psychosocial adjustment? Is there a grade level where the rigor of accelerated learning begins to create negative effects to students' psychosocial adjustment? Through Spearman's rank-order correlations, this study examined relationships between grade level and psychosocial adjustment and the number of classes students participated in and their psychosocial adjustment.

Grade level, statistically significant correlations occurred both with psychosocial and school functioning factors. Of the five life satisfaction domains, grade level had a negative association (family friends, school, and living environment). A one-way ANOVA established mean differences of decreases between middle school and high school in life satisfaction's scale score and school and living environment domains. Could negative, weak, but statistically significant relationships between grade level and psychological indicators, attainment value, extrinsic value, emotional environment of the school and parent support at school be associated with the negative association of life satisfaction and grade level? Multiple regression analyses

could depict the variables' contribution to the variance of life satisfaction and could be explored in future study. This study's results do not support extrinsic value increasing with age (Gaspard et al., 2014), but with a weak, negative association would prompt further investigation with a larger sample size.

There were no strong, statistically significant correlations between the number of classes students participated in and psychosocial functioning factors such as stress, psychological factors, and life satisfaction. Perceived stress level had no statistically significant relationship to school achievement (GPA) or the number of ALP classes students participated in so these findings do not support the assertion that high levels of academic stress may lower academic achievement when involved in increased academic expectations (Kaplan et al, 2005). With school functioning factors, there was a weak, moderate and statistically significant relationship with the emotional environment of school climate. This correlation could relate to Kirk et al.'s (2012) study that concluded that teacher relationships were more important to meeting educational goals then students' attitudes towards school. GPA's association with the number of classes was positively correlated. The research into the effect of taking a more intense work load in ALPs needs further investigation to determine if there are any adverse effects to the increased rigor.

Question 3.

What is the relationship between the psychosocial adjustment of students enrolled in accelerated learning programs by gender? This question was answered through point-biserial correlation and rank-biserial correlation. Several studies assert that girls who have psychological symptoms during adolescence may have further mental health issues into adulthood (Robinsons, 2013; Wiklund et al., 2012). Stress and psychological indicators of mental health problems

would then be important to explore. Females in this study (*n* = 57) represented 61% of the study's sample, or nearly 2/3 of the participants.

Females did have stronger associations than males in several psychosocial functioning categories: stress, internalizing, and psychological problems (scale score of PSC-Y). Strength of these associations were weak to very weak with no statistically significant results. Females possessed stronger, albeit very weak correlations in family, friends, living environment, and self domains of life satisfaction and this study results would make no inference to those results being significant. When reviewing the 14 students in the high risk PSC-Y group as an indicator of a representation of the larger population where 17.7% of students aged 10-24 had thoughts of suicide and 8.6% attempted suicide, this study's sample reported 6.5% having suicidal thoughts and 10.8% of the 93 students had attempted suicide at least once. Males had higher incidences of both suicidal ideation and suicide attempts with Fisher's exact test having no statistically significant association with gender.

In 2014, Gaspard et al. asserted that girls would have lower extrinsic value than boys. This study's results were supportive of those results with males recording a stronger, weak association to extrinsic value. There were no other significant relationships between ability beliefs and subject task values and gender. There were no significant associations between other school functioning factors including school climate, GPA and attendance and gender. Results did not support any gender-based conclusions except for the relationship with extrinsic value.

Question 4.

What coping strategies are being used by students in accelerated learning programs? Descriptive statistics were examined to determine the coping strategy domains, (negative avoidance, positive appraisal, family, and anger), utilized by students. Limited comparison can

be made including the finding that coping attributed for 1/3 of variance of global life satisfaction (Suldo, Shaunessy, & Hardesty, 2008). This was similar to this study's reported variance of 44% to life satisfaction.

Correlations between the variables that encompassed psychosocial adjustment, (psychological function and school functioning), and coping strategies could have been divided further into their underlying factors for a more comprehensive examination of the relationships between coping strategies and dependent variables. This would have provided a more robust examination of correlations with psychosocial adjustment factors other than descriptive statistics, thus eliciting possible relationships specific to the domains instead of the overall scale score (Tss), allowing the researcher to make more intricate relationship observations comparable to other previous studies.

Conclusions

The importance of the *Lives in School Context* theoretical model to study both the ego (psychosocial adjustment) and ethos (school context) domains of schools to search for gaps is endorsed by the results of this research study. The 93 respondents have added to the study of high achieving students participating in ALPs and the examination of their psychosocial adjustment. By doing so, they have provided additional information for researchers to utilize for future studies, and correlations amongst the numerous variables for practitioners to consider as they explore their school climate and its context of meeting the needs of adolescents.

Adolescence can be a difficult time for students regardless of their participation in ALPs, general education, or special education. During secondary school, suicide prevention programs; access to mental health professionals either through the school counseling department, community resources, or collaboratively; and counselor guidance for meeting academic and

career goals should be readily available. Preparing students for the higher academic demands and social needs of adolescence is preferential in being preventative instead of reactive to the psychosocial adjustment needs of students during this transitional time of life. Effective social skills training including anger management and developing coping skills; as well as, developing effective study skills should be part of the elementary curriculum preparing younger students for success in secondary education.

Significantly, school climate perception inventories should be completed regularly by students, parents, teachers, administrators, and community members so that the environment in the school setting is a supportive academic climate that illustrates support for student and teacher development to be part of the decision-process where an aura of teacher-student respect, care and importance to one another resonates throughout the school's hallways. As more opportunities for academic advancement in secondary school occurs for students, the more important it will be to provide the environment that will satisfy psychological, academic, safety, and social needs. Students' satisfaction with school climate relates to their academic well-being and peer and teacher relationships (Robertson, 2013; Trautwein et al., 2012; Wang & Peck, 2013); which then supports them through the transitional time of adolescence.

Recommendations for Further Research

The study of adolescents enrolled in accelerated learning programs is still developing. This study has added to the previous research in identifying relationships between the psychosocial adjustment of students participating in ALPs by grade level, gender, the number of classes they are enrolled in, and the inter-relationships between the psychosocial adjustment variables themselves. There are questions and correlations that this study has not explored or answered. Additional research into the ability for *successful* (an arbitrary concept that could be

assessed and defined) high-achieving students that experience additional stressors that ALPs expose them to while maintaining their academic achievement is warranted; as is the continued study into the effects of participating in rigorous curriculum and the protective factors that students utilize or create to effectively transition through adolescence to adulthood, psychosocially unscathed.

The scope of this research focused on the psychosocial functioning from Roeser et al.'s (2000) *Lives in School Context* model. Representing Erickson's ego, the model's other aspect, school context (ethos) could benefit from further investigation including how the two interrelate. By doing so, practitioners could better understand perceptions of youth in regards to relationships with teachers, and opportunities for autonomy and competence; and in turn, create middle and high schools that are conscious of the complex social-emotional and academic needs of adolescents.

In 2011, Bronk's study concluded that "purpose helped foster the development of both social and ego identities" (p. 36). While only 20% of adolescents find a purpose in life, by doing so, they can direct their time and energy towards developing positive identities (Bronk, 2011). As Eccles et al. (2001) acknowledges, adolescents' choices, motivation, decisions, etc. can be persuaded by a multitude of variables and as Bronk posits, purpose can foster social (ethos) and ego identities. These are important correlations, as it may explain why adolescents enrolled in accelerated learning programs succeed in a stressful environment when facing daily stressors and stressors related to studying rigorous curriculum. There is more, in-depth research that can be conducted using the EVT model of academic motivation. This study did not explore the relationships between the six domains of EVT and how they might interact with one another and those interaction's implications for failure or success in ALPs.

This study's sample included middle school and early high school students who are enrolled in ALPs. This lends to a future longitudinal study of the eighth and ninth grade students when they are high school students in 11th and 12th grade of school examining the impact their involvement with ALPs have had on their psychosocial adjustment over a period of time. This longitudinal study could be qualitative or a mixed-methods design to explore and better understand how adolescents involved in ALP programs perceive their own psychosocial adjustment.

Further tests, comparisons and study design alterations could be completed on this study's sample to further dissect the data. The explanatory design of this study could be modified to a prediction correlation design where predictor variables project an outcome on a criterion variable. Linear regression used in this study to analyze the amount of variance in the dependent variable was explained by the independent variable and to determine the strength and magnitude of relationships among variables can also be used to predict values of the dependent variable based upon independent variable values (Laerd Statistics, 2016). Multiple regression could be used to examine the combined independent variables' relationships with a dependent variable to determine the combined influence and comparisons of strength amongst the independent variables (Creswell, 2015). A partial correlation would explain if one of the independent variables, (gender, grade level, or number of ALP classes), acted as an intervening variable influencing both the other independent variables and the dependent variable. Lastly, general education students not participating in ALP classes from the same school district and grade levels could be given the same instruments used in this study to compare and contrast similarities and differences between general education students and students enrolled in ALP classes.

Implications for Professional Practice

Readers should be aware of the structure of the explanatory correlation research design. This study design's focus is on relationships and associations between variables and the strength and direction of those relationships. When interpreting the results of the study, the results do not imply that the findings have causal effects or that one variable causes another.

Research into the psychosocial adjustment of students participating in accelerated learning programs and their coping strategies is still evolving. Readers need to be cautious of generalization to other geographical areas as advanced learning opportunities in other settings may not correlate well with the learning environment experienced in this study sample's location. Furthermore, much of this study's literature review in regards to studying students' psychosocial adjustment is based upon Advanced Placement® and International Baccalaureate® program involvement, designs that may differ from the actual study's sample of students participating in advanced learning classes, dual credit, and AP® programs. While each of these programs share commonality and involve more rigor than a general education classroom, they are still different programs that can have their own nuances.

The mental health needs of high achieving students participating in ALPs is a focus that may go under-reported. Research suggests that students involved in rigorous curriculum experience higher levels of stress than general education peers, but to the stress levels may go unnoticed or be attributed to the greater expectations students face. Being a high achieving student does not protect an adolescent from the same stressors their peers are dealing with in addition to the additional academic stress. School counselors, school psychologists, teachers, administrators, parents, and community members should be well-versed in the psychological indicators and behaviors of depression, suicide, and other mental health symptoms.

Increasing students' protective factors for the transitional period of adolescence should begin before middle school so that adolescents have the skills and strategies to healthily confront stressful situations. As studies have reported, especially for girls, the psychosocial problems brought to adolescence may continue into adulthood. Social-emotional training, coping strategies, anger skills, study habits, stress release, test anxiety, etc. need to be presented to students prior to adolescence so that they have effective skills to choose from.

The high correlations between the school climate domains of teaching and learning and emotional domains should not go ignored by school districts and necessitates continual study as to students' perceptions and the moderately positive relationship these domains have with students' life satisfaction and inverse relationships they have with psychological problems and perceived stress levels. The importance of teaching and learning domains of school climate are collaborated through other studies and note the impact it has on students' academic achievement, motivation and socio-emotional well-being (De Wit et al., 2011; Eccles & Roeser, 2011). There are free resources available to practitioners in evaluating their schools' school climate and focusing on improving one's school climate is beneficial to the psychosocial adjustment of adolescents.

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Appendix A

Figure 1 Permission for Use

NORTHWEST NAZARENE UNIVERSITY

Mary Dowski <madowski@nnu.edu>

Permission for use

8 messages

Mary Dowski <madowski@nnu.edu> Fri, Jan 29, 2016 at 9:13 PM
To: awigfiel@umd.edu, Mary Dowski <madowski@nnu.edu>

Dear Dr. Wigfield,

I am completing my doctoral studies in Educational Leadership at Northwest Nazarene University in Nampa, Idaho. I would like your permission to use two items from the study titled "Expectancy-Value Theory of Achievement Motivation" (2000) published in *Educational Psychology, 25,* 68-81. First, I would like to reproduce the expectancy-value model of achievement motivation (p. 69). Due to the quality of the diagram in print, I would need to recreate the model so that it is legible. Second, as part of my study's instruments, I am asking permission to utilize your "Items Used to Assess Children's Ability Beliefs adn Subjective Task Values" (Table 1), p. 70.

My research study will be focused on examining the psychosocial functioning, school functioning, and coping strategies of early adolescents and adolescents in accelerated learning programs. After reviewing the literature and theoretical frameworks, I believe that the expectancey-value model of achievement motivation supports my theoretical framework through Dr Eccles et al., "Lives in School Contexts" model. Thus, I have incorporated the achievement model into my study.

I look forward to hearing from you.

Sincerely,
Mary Dowski

Allan L. Wigfield <awigfiel@umd.edu> Sat, Jan 30, 2016 at 6:21 AM
To: Mary Dowski <madowski@nnu.edu>

HI Mary- thanks for your interest in our work. The measures are in the public domain so they are available for all to use; we of course appreciate being cited when people use them. For a great deal of information about the measures and our projects go to the Gender and Achievement Research website at the University of Michigan.

Here are a couple of versions of the model.

Allan Wigfield

Appendix B

Figure 3 Permission for Use (Public Domain)

NORTHWEST NAZARENE UNIVERSITY

Mary Dowski <madowski@nnu.edu>

Permission requested

3 messages

Mary Dowski <madowski@nnu.edu> Tue, May 5, 2015 at 6:10 PM
To: jeccles@umich.edu, Mary Dowski <madowski@nnu.edu>

Dear Ms. Eccles,

I am just beginning my doctoral studies in Educational Leadership at Northwest Nazarene University in Nampa, Idaho. I would like to use or adapt your figures of your conceptual model located in the article, School as a Context of Early Adolescents' Academic and Social-Emotional Development: A Summary of Research Findings, *The Elementary School Journal, 100*(5), figure 3 & 4, p. 448. Figure #3 is titled,"Two specific aspects of adolescents' lives in school contexts" and Figure #4 is titled, "Two aspects of adolescent functioning". I would like to incorporate these figures into my theoretical framework.

My research study will be focused on examining the psychosocial functioning, school functioning, and coping strategies of early adolescents and adolescents in accelerated learning programs. After reviewing the literature and other theoretical frameworks, I believe that this model best supports my study.

I look forward to hearing from you.

Sincerely,
Mary Dowski

Jacqueline Eccles <jeccles@umich.edu> Wed, May 6, 2015 at 9:30 AM
To: Mary Dowski <madowski@nnu.edu>

You have my permission. Please send me an electronic copy of what you write up
Best wishes,
Jacque

[Quoted text hidden]

Mary Dowski <madowski@nnu.edu> Wed, May 6, 2015 at 11:37 AM
To: Jacqueline Eccles <jeccles@umich.edu>

Thank you very much! I will send you a copy.

Mary
[Quoted text hidden]

Appendix C

Permission: School District

[redacted]

March 30, 2016

Northwest Nazarene University
Attention: HRRC Committee
Helstrom Business Center 1st floor
623 S. University Boulevard
Nampa, Idaho 83686

RE: Research Proposal Site Access for Ms. Mary Dowski

Dear HRRC Members:

This letter is to inform the HRRC that Administration at the [redacted] School District has reviewed the proposed dissertation research plan including subjects, intervention, assessment procedures, proposed data and collection procedures, data analysis, and purpose of the study.

Ms. Dowski has permission to conduct her research in the district of and with the students and staff of the [redacted] School District. The authorization dates for this research are August 2016 to April 2017.

Sincerely,

[redacted]

[redacted]
Superintendent of Schools

Appendix D

Parent Consent Form

September XX, 2016

Dear Parent or Guardian,

This letter provides information about a research study that will be conducted at your child's school as a part of my graduate program at Northwest Nazarene University. The study has been reviewed by the Human Research Review Committee at Northwest Nazarene University and has been successfully approved. My goal in conducting this research is to determine the psychosocial effects of adolescents enrolled in accelerated learning programs.

- Benefits to your child participating in this research study:
  - Understanding the relationship between advanced opportunities (accelerated learning) and adolescents' social-emotional well-being (i.e., stress, anxiety, depression, etc.);
  - determining if the age of students and the number of accelerated learning courses they take have any effects on their social-emotional well-being; and
  - uncovering coping skills that students use as accelerated learners.

- Why your child should participate: Due to the focus of college readiness throughout the United States and the opportunities for adolescents to participate in a variety of accelerated learning programs like dual credit, Advanced Placement®, gifted enrichment classes and other programs, we need to learn the impact these rigorous programs have on the social-emotional well-being of our adolescents. The information collected from this research study may increase our knowledge of how advanced learners cope with rigorous studies and may assist schools in learning how to best support adolescents enrolled in rigorous studies. In addition, the information from the study will be shared with the teachers and administrators at your child's school in order to benefit from the results of the study in understanding adolescents' psychosocial well-being who enroll in accelerated learning opportunities. Please note that neither you nor your child will be compensated for your child's participation in the study. However, all adolescents who participate and complete the study will be entered into a drawing for one of several $25 gift cards.

- What study participation requires: If your child is given permission to participate in the study, he or she will be asked to complete several paper-and-pencil or online questionnaires (format to be chosen by your school). Completion of the questionnaires will occur during one session anticipated to be 45 minutes in length and scheduled at a time of least disruption to the learning environment. It is anticipated it will take your child between 10 minutes and 30 minutes to complete the questionnaires. These questionnaires include:
  - Adolescent Coping Orientation for Problem Experiences (ACOPE): identifies which strategies adolescents use in difficult situations
  - Multidimensional Child Life Satisfaction Scale (MSLSS): measures adolescents' overall life satisfaction in 5 domains (family, friends, school, self, and living environment)
  - Pediatric Symptoms Checklist (PSC-Y): measures psychosocial and behavioral problems
  - Perceived Stress Scale (PSS): measures a child's perception of stress
  - School Climate Inventory: measures one's perception of the school environment in 4 domains: Teaching & learning, child relationships, emotional environment, & parent support

- Child Attitude Questionnaire (Ability Beliefs & Subjective Task Value): measures one's beliefs about their academic motivation and abilities
- Student academic records will be reviewed by school personnel. The following information will be shared with me as part of the study's data.
  - Transcripts (it provides your child's grade point average (GPA) and list of accelerated learning courses taken)
  - In-School Conduct Records
  - Attendance Records

Identifying information will be removed before being forwarded to me to analyze. Transcripts and other school records will be coded with a unique child identifier that will also be include on your child's assessments. Students will supply demographic Information (Age, gender, and FRPL [free or reduced-priced lunch] to determine socioeconomic status) as part of the questionnaire completion process

- Please note: Your decision to allow your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. In addition to your permission, your child will also be asked if he or she would like to take part in this project. The choice to participate or not will not impact your child's grades or status at school.

- Anonymity of your child's responses: I anticipate that there is minimal risk to your child for participating I this research. Proctors will be present during administration to answer any questions your child may have during completion of the questionnaires. In addition, after your child has completed the questionnaires he or she will be given a list of persons to contact if he or she would like to discuss personal issues. Your child's privacy and research records will be kept confidential to extent of the law. This study is anonymous. Your child's name will not be linked in any way to his or her responses. All information that is obtained during this research project will be kept strictly secure and will not become a part of your child's school record. Pseudonyms or codes will be substituted for the names of children and the school. This helps protect confidentiality and anonymity. This permission form will be explained, signed, and collected before questionnaires are handed out in order to avoid linking students' names to their responses. Paper questionnaires, transcripts, attendance data, behavior data, and permission forms will be kept in a locked cabinet with only the researcher having the key. Online questionnaires are only accessible by password, only known by the researcher.

- What will happen with your child's responses: I plan to use the information from this study to inform educators about the effects of accelerated learning on the psychosocial adjustment of adolescents. The results of this study will be used for a doctoral dissertation and may be published. However, the data obtained from your child will be combined with data from other respondents and the published results will not include the names of children or any other information that would in any way personally identify your child.

- Questions? If you have any questions about this research study, please feel free to contact me either by e-mail or telephone. Please keep a copy of this form for your records. The results of my research will be available after August 1, 2017. If you would like to have a copy of the results of

my research or have any questions, please contact me at 208-477-8137; or contact my advisor, Dr. Russell Joki, at 208-866-2111.

- Would you like your child to participate? To permit your child to participate in this study, complete the consent form located below and have your child turn it in to his or her school counselor. Please keep the second copy for your records.

Sincerely,

Mary Dowski
Northwest Nazarene University Doctoral Candidate
208-477-8137
madowski@nnu.edu

****

Consent for Child to Participate in Research Study

I freely give my permission to let my child to take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

Child's printed name: _____

Grade level of child: _____

Parent/Guardian printed name: _____

Parent/Guardian signature: _____

Date: _____

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by Northwest Nazarene University's Human Research Review Committee and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of Researcher	Printed Name of Researcher	Date

Appendix E

Student Assent Form

Student Assent Form

September XX, 2016

Hello!

I am writing to ask you to take part in a research study by filling out several questionnaires and by providing me permission to receive a copy of your transcript for academic grades and number of dual credit courses you have taken and to receive a copy of your school conduct records. Information I gather from your school will not be shared with others and is solely for the purpose of my study. My goal in conducting the study is to determine the effects of accelerated learning like college credit classes and honors classes on adolescents' social-emotional well-being. As part of my doctorate program at Northwest Nazarene University, this study has been reviewed by the Human Research Review Committee at Northwest Nazarene University and has been approved to be completed at your school.

- Why I am asking you to take part in this study: This study is part of a project looking to understand the relationship between accelerated learning programs and the social-emotional (psychosocial) effects the rigorous studies may have on adolescents. I am trying to understand the relationships between: 1) accelerated learning classes and adolescents' psychosocial well-being; and 2) the age of students or the number of accelerated learning classes students are taking and accelerated learning programs. I will also investigate coping skills that adolescents use to reduce any negative effects of rigorous studies. You are being asked to participate because your school has identified you as a student who participates in accelerated learning classes.

- Why you should take part in this study: Students growing up in this generation are facing many opportunities to gain college credits and accelerate their learning during high school. We need to learn more about the relationship between this accelerated learning that can begin in middle school and how the rigorous studies are affecting our adolescents. The information I gather may help us better understand these relationships as well as understand the coping skills students use to lessen any negative effects. In addition, results from the study will be shared with the teachers and administrators at your school to better help them understand how accelerated learning opportunities affect you, the student! Please note that you will not be paid for taking part in the study. However, for students that complete the questionnaires in their entirety, their names will be entered into a random drawing of several $25 gift cards amongst all study participants. (Your school will notify you if you win if you are qualified to be entered into the drawing by completing the questionnaires).

- Filling out the questionnaires. These questionnaires ask about your thoughts, behaviors, and attitudes about school, yourself, teachers, family and life in general. I expect that it will take between 10 and 30 minutes to fill out the questionnaires.

- Please note: Your involvement in the study is completely voluntary. By signing this form, you are agreeing to take part in this research. If you choose not to participate, or if you wish to stop taking part in the study at any time, you will not be punished in any way. Not participating will not affect your grades at school.

- Privacy of your responses: I do not expect that there will be more than minimal risk to you for participating in this research study. I will be here to answer questions while you complete the questionnaires. When you are finished with the questionnaires, you will receive a piece of paper that lists persons to contact if you would like to discuss personal issues. Your privacy and research records will be kept confidential to extent of the law. Your personal information will be kept confidential. Your name will not be linked in any way to your responses and only I will view your name on the transcript and school conduct record provided for the study. Codes will be substituted for your name on the actual assessments. This helps protect confidentiality and anonymity. This assent form will be explained, signed, and collected before questionnaires are handed out in order to avoid linking your name to your responses. Paper questionnaires, online questionnaire copies, transcripts, attendance data, behavior data, and permission forms will be kept in a locked cabinet with only the researcher having the key. Online questionnaires are only accessible by password, only known by the researcher.

- What I'll do with your responses: I plan to use the information from this study to let others know about the effects accelerated learning programs may have on adolescents' psychosocial well-being. The results of this study may be published. However, your responses will be combined with responses from other adolescents without your name or any other information that would in any way identify you.

- Questions? If you have any questions about this research study, please contact me by email (madowski@nnu.edu) or phone number (208-477-8137).

Thank you for taking the time to participate in this study.

Sincerely,

Mary Dowski
Northwest Nazarene University Doctoral Candidate
****

Student Assent to Participate in Research Study

I freely give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and assent form for my records.

Child's printed name: _____ Grade level of child: _____

Child's signature: _____ Date: _____

Statement of Person Obtaining Informed Consent

I certify that participants have been provided with an informed consent form that has been approved by Northwest Nazarene University's Human Research Review Committee and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of Researcher	Printed Name of Researcher	Date

Appendix F

Mental Health and Suicide Prevention Resources

Explanation of Research Project: Thank you for taking the time to complete these questionnaires. Accelerated learning programs are becoming more popular in schools and the results of this study that you participated in will help determine the effects the participation in advanced classes and programs have on adolescents' psycho-social (emotional well-being) functioning and school functioning. For example, we want to know if taking advanced classes causes undue stress or do adolescents in these accelerated learning programs develop coping strategies to combat stress from rigorous classes. We also want to determine if there are any relationship between the number of classes a student may take or the age of the student may take with their psychosocial and school functioning.

General Mental Health Resources: There are community resources to support you and your family. Please visit your school counselor or school administrator for resources. When needing immediate assistance, call 911 or the National Suicide Prevention Hotline at 1-800-273-TALK (8255).

Contact List for Personal Concerns

If you or someone you know may want to talk to someone due to participating in this study, please contact:

- your school counselor, _____
- school's administrator, _____
- [redacted]'s Suicide Prevention Line at (1-800-273-TALK) where you can speak to a volunteer. They can talk to you about any concerns you have as well as directing you to local mental health resources.

Appendix G

HRRC Approval Letter

RE: [Northwest Nazarene University] Submission Protocol #26042016 - AN EXPLANATORY CORRELATION RESEARCH STUDY ON PSYCHOSOCIAL ADJUSTMENT AND COPING STRATEGIES OF ADOLESCENTS ENROLLED IN ACCELERATED...

1 message

Northwest Nazarene University <hrrc@nnu.edu> Wed, Apr 27, 2016 at 12:02 PM
Reply-To: hrrc@nnu.edu
To: Mary Dowski <madowski@nnu.edu>

Dear Mary,

The HRRC has reviewed your protocol: Protocol #26042016 - AN EXPLANATORY CORRELATION RESEARCH STUDY ON PSYCHOSOCIAL ADJUSTMENT AND COPING STRATEGIES OF ADOLESCENTS ENROLLED IN ACCELERATED LEARNING PROGRAMS. You received "Full Approval". Congratulations, you may begin your research. If you have any questions, let me know.

Heidi Curtis
Northwest Nazarene University
HRRC Member
623 S University Blvd
Nampa, ID 83686

You can go here to view the submission:
http://nnu.submittable.com/user/submissions/5564646

Appendix H

Perceived Stress Scale-10

PSS

INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during THE LAST MONTH. In each case, please indicate your response by placing an "X" over the circle representing HOW OFTEN you felt or thought a certain way.

	Never 0	Almost Never 1	Sometimes 2	Fairly Often 3	Very Often 4
1. In the last month, how often have you been upset because of something that happened unexpectedly?	○	○	○	○	○
2. In the last month, how often have you felt that you were unable to control the important things in your life?	○	○	○	○	○
3. In the last month, how often have you felt nervous and "stressed"?	○	○	○	○	○
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	○	○	○	○	○
5. In the last month, how often have you felt that things were going your way?	○	○	○	○	○
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	○	○	○	○	○
7. In the last month, how often have you been able to control irritations in your life?	○	○	○	○	○
8. In the last month, how often have you felt that you were on top of things?	○	○	○	○	○
9. In the last month, how often have you been angered because of things that were outside your control?	○	○	○	○	○
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	○	○	○	○	○

version: 03/29/2016
PSS 1 of 1

Appendix I

Pediatric Symptoms Checklist (PSC-Y)

Pediatric Symptoms Checklist (PSC-Y)

INSTRUCTIONS: Please mark under the heading that best fits you, for questions 37 and 38 circle Yes or No	Never	Sometimes	Often
1. Complain of aches or pains			
2. Spend more time alone			
3. Tire easily, little energy			
4. Fidgety, unable to sit still			
5. Have trouble with teacher			
6. Less interested in school			
7. Act as if driven by motor			
8. Daydream too much			
9. Distract easily			
10. Are afraid of new situations			
11. Feel sad, unhappy			
12. Are irritable, angry			
13. Feel hopeless			
14. Have trouble concentrating			
15. Less interested in friends			
16. Fight with other children			
17. Absent from school			
18. School grades dropping			
19. Down on yourself			
20. Visit doctor with doctor finding nothing wrong			
21. Have trouble sleeping			
22. Worry a lot			
23. Want to be with parent more than before			
24. Feel that you are bad			
25. Take unnecessary risks			
26. Get hurt frequently			
27. Seem to be having less fun			
28. Act younger than children your age			
29. Do not listen to rules			
30. Do not show feelings			
31. Do not understand other people's feelings			
32. Tease others			
33. Blame others for your troubles			
34. Take things that do not belong to you			
35. Refuse to share			
36. During the past three months, have you thought of killing yourself?	Yes	No	
37. Have you ever tried to kill yourself?	Yes	No	

Appendix J

Multidimensional Students' Life Satisfaction Scale (MSLSS)

MULTIDIMENSIONAL STUDENTS' LIFE SATISFACTION SCALE (MSLSS)

We would like to know what thoughts about life you've had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Here are some questions that ask you to indicate your satisfaction with life. Circle the number (from 1 to 6) next to each statement that indicates the extent to which you agree or disagree with each statement. It is important to know what you REALLY think, so please answer the question the way you really feel, not how you think you should. This in NOT a test. There are NO right or wrong answers. Your answers will NOT affect your grades, and no one will be told your answers.

Circle **1** if you **STONGLY DISAGREE** with the sentence
Circle **2** if you **MODERATELY DISAGREE** with the sentence
Circle **3** if you **MILDLY DISAGREE** with the sentence
Circle **4** if you **MILDLY AGREE** with the sentence
Circle **5** if you **MODERATELY AGREE** with the sentence
Circle **6** if you **STRONGLY AGREE** with the sentence

1. My friends are nice to me	1	2	3	4	5	6
2. I am fun to be around	1	2	3	4	5	6
3. I feel bad at school	1	2	3	4	5	6
4. I have a bad time with my friends	1	2	3	4	5	6
5. There are lots of things I can do well	1	2	3	4	5	6
6. I learn a lot at school	1	2	3	4	5	6
7. I like spending time with my parents	1	2	3	4	5	6
8. My family is better than most	1	2	3	4	5	6
9. There are many things about school I don't like	1	2	3	4	5	6
10. I think I am good looking	1	2	3	4	5	6
11. My friends are great	1	2	3	4	5	6
12. My friends will help me if I need it	1	2	3	4	5	6
13. I wish I didn't have to go to school	1	2	3	4	5	6
14. I like myself	1	2	3	4	5	6
15. There are lots of fun things to do where I live	1	2	3	4	5	6
16. My friends treat me well	1	2	3	4	5	6
17. Most people like me	1	2	3	4	5	6
18. I enjoy being at home with my family	1	2	3	4	5	6
19. My family gets along well together	1	2	3	4	5	6
20. I look forward to going to school	1	2	3	4	5	6
21. My parents treat me fairly	1	2	3	4	5	6

Continued on Next Page

Circle **1** if you **STONGLY DISAGREE** with the sentence
Circle **2** if you **MODERATELY DISAGREE** with the sentence
Circle **3** if you **MILDLY DISAGREE** with the sentence
Circle **4** if you **MILDLY AGREE** with the sentence
Circle **5** if you **MODERATELY AGREE** with the sentence
Circle **6** if you **STRONGLY AGREE** with the sentence

22. I like being in school	**1**	**2**	**3**	**4**	**5**	**6**
23. My friends are mean to me	**1**	**2**	**3**	**4**	**5**	**6**
24. I wish I had different friends	**1**	**2**	**3**	**4**	**5**	**6**
25. School is interesting	**1**	**2**	**3**	**4**	**5**	**6**
26. I enjoy school activities	**1**	**2**	**3**	**4**	**5**	**6**
27. I wish I lived in a different house	**1**	**2**	**3**	**4**	**5**	**6**
28. Members of my family talk nicely to one another	**1**	**2**	**3**	**4**	**5**	**6**
29. I have a lot of fun with my friends	**1**	**2**	**3**	**4**	**5**	**6**
30. My parents and I do fun things together	**1**	**2**	**3**	**4**	**5**	**6**
31. I like my neighborhood	**1**	**2**	**3**	**4**	**5**	**6**
32. I wish I lived somewhere else	**1**	**2**	**3**	**4**	**5**	**6**
33. I am a nice person	**1**	**2**	**3**	**4**	**5**	**6**
34. This town is filled with mean people	**1**	**2**	**3**	**4**	**5**	**6**
35. I like to try new things	**1**	**2**	**3**	**4**	**5**	**6**
36. My family's house is nice	**1**	**2**	**3**	**4**	**5**	**6**
37. I like my neighbors	**1**	**2**	**3**	**4**	**5**	**6**
38. I have enough friends	**1**	**2**	**3**	**4**	**5**	**6**
39. I wish there were different people in my neighborhood	**1**	**2**	**3**	**4**	**5**	**6**
40. I like where I live	**1**	**2**	**3**	**4**	**5**	**6**

Appendix K

Adolescent-Coping Orientation for Problem Experiences (ACOPE) (Revised-19 Item)

When you face difficulties or feel tense, how often do you:	***Never***	***Hardly Ever***	**Sometimes**	**Often**	**Most of the Time**
1. Go along with parents' requests and rules	1	2	3	4	5
2. Use drugs prescribed by your doctor	1	2	3	4	5
3. Try to reason with parents and talk things out; compromise	1	2	3	4	5
4. Try to think of the good things in your life	1	2	3	4	5
5. Say nice things to others	1	2	3	4	5
6. Get angry and yell at people	1	2	3	4	5
7. Let off steam by complaining to family members	1	2	3	4	5
8. Use drugs (not prescribed by doctor)	1	2	3	4	5
9. Blame others for what's going wrong	1	2	3	4	5
10. Be close with someone you care about	1	2	3	4	5
11. Talk to your mother about what bothers you	1	2	3	4	5
12. Try to keep up friendships or make new friends	1	2	3	4	5
13. Do things with your family	1	2	3	4	5
14. Smoke	1	2	3	4	5
15. Try to see the good things in a difficult situation	1	2	3	4	5
16. Drink beer, wine, liquor	1	2	3	4	5
17. Say mean things to people; be sarcastic	1	2	3	4	5
18. Talk to your father about what bothers you	1	2	3	4	5
19. Let off steam by complaining to your friends	1	2	3	4	5

Appendix L

Student Attitude Questionnaire (Ability Beliefs & Subjective Task Values)

Student Attitude Questionnaire (Ability Beliefs & Subjective Task Values)

Purpose: This questionnaire is designed to record an adolescent's self-perception of success on tasks and difficulty of tasks. It also records the amount of value an adolescent attaches to a task through his or her motivation or desire to complete it.

Directions:

- Read each statement below which describes a statement in regards to the academic subject of "Math".
- Determine your response to each question on the Likert scale of 1 to 7. Read each question carefully and then determine at what point on the Likert scale you *agree with the statement* (1, 2, 3, 4, 5, 6, or 7) or *answer the question being asked* (1, 2, 3, 4, 5, 6, or 7). Circle only ONE response for each question.

---

1. In general, I find working on math assignments

Very boring						Very interesting
1	2	3	4	5	6	7

2. How good at math are you?

Not at all good						Very good
1	2	3	4	5	6	7

3. How hard do you have to try to get good grades in math?

A little						A lot
1	2	3	4	5	6	7

4. In general, how hard is math for you?

Very easy						Very hard
1	2	3	4	5	6	7

5. Compared to other students in your class, how well do you expect to do in math this year?

Much worse than other students						Much better than other students
1	2	3	4	5	6	7

6. How well do you think you will do in your math course this year?

Very poorly						Very well
1	2	3	4	5	6	7

7. Compared to most other students in your class, how hard is math for you?

Much easier						Much harder
1	2	3	4	5	6	7

8. How useful is learning advanced high school math (like Algebra II, Trigonometry, or Calculus) for what you want to do after you graduate from high school and go to work?

Not very useful						Very useful
1	2	3	4	5	6	7

9. How have you been doing in math this year?

Very poorly						Very well
1	2	3	4	5	6	7

10. How much do you like doing math?

Not very much						Very much
1	2	3	4	5	6	7

11. Is the amount of effort it will take to do well in advanced high school math courses (like Algebra II, Trigonometry, or Calculus) worthwhile to you?

Not very worthwhile						Very worthwhile
1	2	3	4	5	6	7

12. How hard do you have to study for math tests to get a good grade?

A little						A lot
1	2	3	4	5	6	7

13. If you were to order all the students in your math class from the worst to the best in ma where would you put yourself?

The worst						The best
1	2	3	4	5	6	7

14. Compared to most other school subjects that you take, how hard is math for you?

My easiest subject						My hardest subject
1	2	3	4	5	6	7

15. How hard would you have to try to do well in an advanced high school math course?

Not very hard						Very hard
1	2	3	4	5	6	7

16. To do well in math I have to work

Much harder in math than in other subjects						Much harder in other subjects than in math
1	2	3	4	5	6	7

17. I feel that, to me, being good at solving problems which involve math or reasoning mathematically is

Not at all important						Very important
1	2	3	4	5	6	7

18. How important is it to you to get good grades in math?

Not at all important						Very important
1	2	3	4	5	6	7

19. How useful is what you learn in advanced high school math classes (like Algebra II, Trigonometry, or Calculus) for your daily life outside school?

Not at all useful						Very useful
1	2	3	4	5	6	7

Appendix M

School Climate Survey

School Climate Survey

Instructions – Please read each question carefully and circle the one answer that most closely fits your opinion. We appreciate your taking the time to do the survey.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Please indicate how much you agree or disagree with the following statement about your school:					
My school has clear rules and consequences for behavior.	1	2	3	4	5
2. Please indicate how much you agree or disagree with the following statements about students at your school:					
Most students in my school…					
a. Do their best, even when their work is difficult	1	2	3	4	5
b. Do all their homework	1	2	3	4	5
c. Think it is OK to cheat if other students are cheating	1	2	3	4	5
d. Try to do a good job on schoolwork even when it is not interesting	1	2	3	4	5
3. Please indicate how much you agree or disagree with the following statements about your school:					
Most students in my school:					
a. Are well-behaved	1	2	3	4	5
b. Do not really care about each other	1	2	3	4	5
c. Help each other when asked	1	2	3	4	5
d. Treat each other well	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4. Please indicate how much you agree or disagree with the following statements about your teachers: **My teachers…** a. Give me a lot of encouragement	**1**	**2**	**3**	**4**	**5**
b. Make learning interesting	**1**	**2**	**3**	**4**	**5**
c. Encourage students to share their ideas about things we are studying in class	**1**	**2**	**3**	**4**	**5**
d. Notice when I am doing a good job and let me know about it	**1**	**2**	**3**	**4**	**5**
e. Will help me improve my work if I do poorly on an assignment	**1**	**2**	**3**	**4**	**5**
f. Provide me with lots of chances to be part of class discussions or activities	**1**	**2**	**3**	**4**	**5**
g. Often assign homework that helps me learn	**1**	**2**	**3**	**4**	**5**
h. Will give me extra help at school outside of our regular class	**1**	**2**	**3**	**4**	**5**
5. Please indicate how much you agree or disagree with the following statements about your school…					
a. Teachers at my school treat students with respect	**1**	**2**	**3**	**4**	**5**
b. Students in my school treat each other with respect	**1**	**2**	**3**	**4**	**5**
c. Students are treated fairly by the adults in the school	**1**	**2**	**3**	**4**	**5**
d. Most students in my school are easily able to work out disagreements with other students	**1**	**2**	**3**	**4**	**5**
e. There are lots of chances for students in my school to talk with a teacher one-on-one	**1**	**2**	**3**	**4**	**5**
f. Students at this school are often bullied	**1**	**2**	**3**	**4**	**5**
g. Students at this school are often teased or picked on	**1**	**2**	**3**	**4**	**5**
h. Harassment, intimidation, and bullying by other students are a problem	**1**	**2**	**3**	**4**	**5**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
i. Adults in this school apply the same rules to all students equally	**1**	**2**	**3**	**4**	**5**
j. Adults in this school are usually willing to make the time to give students extra help	**1**	**2**	**3**	**4**	**5**
k. My teachers really care about me	**1**	**2**	**3**	**4**	**5**
6. Please indicate how much you agree or disagree with the following: **Thinking back over the past year in school, how often did you…** Feel that the school work you were assigned was meaningful and important?	**1**	**2**	**3**	**4**	**5**
7. Please indicate how much you agree or disagree with the following: a. My family wants me to do well in school	**1**	**2**	**3**	**4**	**5**
b. My parents ask if I've gotten my homework done	**1**	**2**	**3**	**4**	**5**
c. My parents would punish me if they found out I skipped school	**1**	**2**	**3**	**4**	**5**

Appendix N

Student Demographics Form

Student Demographics Form

Student's Age: _____

Student's Gender: (please circle one) MALE FEMALE

Student's Grade: (please circle one) 7 8 9 10 11 12

Are you eligible to receive a free or reduced lunch? (please circle one) YES NO

Appendix O

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Mary Dowski** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 03/27/2015

Certification Number: 1732926

Appendix P

Adolescent Suicidal Ideation and Suicide Attempts by Gender, Age, and Grade

Grade	Age	Gender	Suicide Ideation	Suicide Attempt
8	12	Female	X	
8	13	Male	X	
8	14	Male	X	
8	14	Female	X	
8	14	Male	X	
9	14	Female	X	
11	16	Male	X	
11	16	Male		X
11	16	Female	X	
11	16	Female		X
11	16	Female		X
12	17	Female	X	X
12	17	Female	X	X
12	18	Male		X

Appendix Q

Correlation Coefficient Matrix: Psychosocial Adjustment Variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Ability/Expectancy	---															
2	Task Difficulty	-.614**	---														
3	Required Effort	-.395**	.538**	---													
4	Intrinsic Interest Value	.468**	-.522**	-0.176	---												
5	Attainment Value	.450**	-.318**	-0.072	.550**	---											
6	Extrinsic Utility Value	.220*	-0.180	0.034	.468**	.712**	---										
7	Emotional Environment	0.146	-.234*	-0.178	0.170	.314**	.368**	---									
8	Student Relationships	0.067	-0.028	-0.134	-0.028	-0.026	-0.020	0.037	---								
9	Teaching & Learning	.279**	-0.150	-0.153	.288**	.366**	.353**	.557**	-0.013	---							
10	GPA	.353**	-0.100	-0.113	0.087	0.154	0.083	-0.077	-0.187	0.040	---						
11	ACOPE	0.102	-0.177	-0.032	0.184	0.143	.223*	.459**	0.061	.367**	-0.109	---					
12	PSS-6	-0.159	0.168	0.046	-0.089	-.226*	-.223*	-.206*	-0.097	-.350**	0.007	-.496**	---				
13	MSLSS	.304**	-.231*	-0.032	.363**	.481**	.434**	.521**	-0.031	.539**	0.075	.666**	-.566**	---			
14	PSC-Y	-.215*	0.134	0.028	-.233*	-.326**	-.383**	-.424**	0.105	-.506**	-0.022	-.522**	.666**	-.723**	---		
15	PSC-Y High Risk	-0.504	0.279	0.008	-.540*	-0.466	-0.310	0.043	0.506	-.806**	-0.126	-.667**	0.522	-.704**	1.000**	---	
16	Age	-0.138	0.158	0.027	-0.104	-.252*	-0.175	-0.191	-0.137	-0.061	.282**	-.227*	0.200	-.249*	0.184	0.037	---

Note. Associations among domains or categories of the same instrument were not studied in this research and is noted in Ch. 5 as further research.

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

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

Appendix R

Descriptive Statistics by Number of ALP Classes

Grade Level

ALP_Sorted			Frequency	Percent	Valid Percent	Cumulative Percent
1 ALP Class	Valid	MS	39	76.5	76.5	76.5
		Early HS	2	3.9	3.9	80.4
		HS	10	19.6	19.6	100.0
		Total	51	100.0	100.0	
2 ALP Classes	Valid	MS	1	5.9	5.9	5.9
		Early HS	3	17.6	17.6	23.5
		HS	13	76.5	76.5	100.0
		Total	17	100.0	100.0	
3 or More ALP Classes	Valid	Early HS	6	24.0	24.0	24.0
		HS	19	76.0	76.0	100.0
		Total	25	100.0	100.0	

Your gender.

ALP_Sorted			Frequency	Percent	Valid Percent	Cumulative Percent
1 ALP Class	Valid	Male	17	33.3	33.3	33.3
		Female	34	66.7	66.7	100.0
		Total	51	100.0	100.0	
2 ALP Classes	Valid	Male	7	41.2	41.2	41.2
		Female	10	58.8	58.8	100.0
		Total	17	100.0	100.0	
3 or More ALP Classes	Valid	Male	12	48.0	48.0	48.0
		Female	13	52.0	52.0	100.0
		Total	25	100.0	100.0	

How old are you?

ALP_Sorted			Frequency	Percent	Valid Percent	Cumulative Percent
1 ALP Class	Valid	12 years old	1	2.0	2.0	2.0
		13 years old	22	43.1	43.1	45.1
		14 years old	17	33.3	33.3	78.4
		15 years old	1	2.0	2.0	80.4
		16 years old	3	5.9	5.9	86.3
		17 years old	5	9.8	9.8	96.1
		18 years old	2	3.9	3.9	100.0
		Total	51	100.0	100.0	
2 ALP Classes	Valid	13 years old	1	5.9	5.9	5.9
		14 years old	1	5.9	5.9	11.8
		15 years old	2	11.8	11.8	23.5
		16 years old	4	23.5	23.5	47.1
		17 years old	9	52.9	52.9	100.0
		Total	17	100.0	100.0	
3 or More ALP Classes	Valid	14 years old	4	16.0	16.0	16.0
		15 years old	2	8.0	8.0	24.0
		16 years old	7	28.0	28.0	52.0
		17 years old	8	32.0	32.0	84.0
		18 years old	4	16.0	16.0	100.0
		Total	25	100.0	100.0	

Appendix S

Linear Regression Results

	Variable Name	R	R^2	Adjusted R^2	*F*(1,91), ******F*(1,12) *p*
IV	Teaching & Learning	.81	64.9%	62.0%	22.22***
DV	PSC-Y HR (High Risk)				< .0005**
IV	ACOPE	.67	44.4%	39.8%	9.60***
DV	PSC-Y HR				.009**
IV	PSC-Y HR	.71	49.6%	45.4%	11.80***
DV	MSLSS				< .0005**
IV	ACOPE	.67	44.3%	43.7%	72.46
DV	MSLSS				< .005**
IV	PSS-6	.57	32%	31.3%	42.88
DV	MSLSS				< .0005**
IV	PSS-6	.67	44.3%	43.7%	72.44
DV	MSLSS				< .0005**
IV	PSC-Y	.70	49.6%	45.4%	99.89
DV	MSLSS				< .0005**
IV	INTRINSIC	.54	29.2%	23.3%	4.94***
DV	PSC-Y HR				.05*
IV	Teaching & Learning	.54	29.0%	28.3%	37.25
DV	MSLSS				< .0005**

Notes. R = absolute Pearson Correlation Coefficient. R^2 = amount of variance in the DV that can be described by the IV. Adjusted R^2 = value of R^2 that is expected in the population (Laerd Statistics, 2015, www.statistics.laerd.com)
*Correlation significant at $p < .05$; ** Correlation significant at $p < .01$
***High Risk group ($n = 12$)

Appendix T

Tukey HSD: MSLSS One-way ANOVA

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Lower Bound	Upper Bound
MSLSS_SUM	MS	Early HS	7.625	9.912	0.723	-16.00	31.25
		HS	20.363*	6.432	0.006	5.03	35.69
	Early HS	MS	-7.625	9.912	0.723	-31.25	16.00
		HS	12.738	9.861	0.404	-10.76	36.24
	HS	MS	-20.363*	6.432	0.006	-35.69	-5.03
		Early HS	-12.738	9.861	0.404	-36.24	10.76
MS_FAMILY	MS	Early HS	3.409	2.636	0.403	-2.87	9.69
		HS	3.738	1.710	0.079	-0.34	7.81
	Early HS	MS	-3.409	2.636	0.403	-9.69	2.87
		HS	0.329	2.622	0.991	-5.92	6.58
	HS	MS	-3.738	1.710	0.079	-7.81	0.34
		Early HS	-0.329	2.622	0.991	-6.58	5.92
MS_SCHOOL	MS	Early HS	-0.893	2.810	0.946	-7.59	5.80
		HS	4.711*	1.823	0.030	0.37	9.06
	Early HS	MS	0.893	2.810	0.946	-5.80	7.59
		HS	5.604	2.795	0.117	-1.06	12.27
	HS	MS	-4.711*	1.823	0.030	-9.06	-0.37
		Early HS	-5.604	2.795	0.117	-12.27	1.06
MS_LIVE ENV	MS	Early HS	3.309	2.911	0.494	-3.63	10.25
		HS	8.305*	1.889	0.000	3.80	12.81
	Early HS	MS	-3.309	2.911	0.494	-10.25	3.63
		HS	4.996	2.896	0.202	-1.91	11.90
	HS	MS	-8.305*	1.889	0.000	-12.81	-3.80
		Early HS	-4.996	2.896	0.202	-11.90	1.91
MS_SELF	MS	Early HS	2.125	1.673	0.416	-1.86	6.11
		HS	1.054	1.086	0.597	-1.53	3.64
	Early HS	MS	-2.125	1.673	0.416	-6.11	1.86
		HS	-1.071	1.664	0.796	-5.04	2.89
	HS	MS	-1.054	1.086	0.597	-3.64	1.53
		Early HS	1.071	1.664	0.796	-2.89	5.04

*. The mean difference is significant at the 0.05 level.