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## **An investigation of the relationship among wellness, perceived stress, mattering, and at-risk status for dropping out of high school**

Jan Cummins Lemon

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AN INVESTIGATION OF THE RELATIONSHIP AMONG WELLNESS,  
PERCEIVED STRESS, MATTERING, AND AT-RISK STATUS  
FOR DROPPING OUT OF HIGH SCHOOL

By

Jan Cummins Lemon

A Dissertation  
Submitted to the Faculty of  
Mississippi State University  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy  
in Counselor Education  
in the Department of Counseling and Educational Psychology

Mississippi State, Mississippi

August 2010

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High school dropout continues to be an issue of national concern, and the inability of educators and researchers to find means of effectively reducing the dropout rate may be grounded in their approach to understanding this issue. Because there is limited prior research in addressing wellness, perceived stress, and mattering in relationship to at-risk status for dropping out of high school, this study concentrates on the gap in the educational and counseling literature documenting the extent to which these variables can contribute to the prediction of students who are at risk of dropping out of high school.

Specifically, wellness, perceived stress, mattering, and at-risk status for dropping out of high school were assessed across 175 students attending a medium-sized high school located in the southeastern part of the United States. Parental informed consent documents and adult student consent documents were obtained primary to gathering data. Packets were administered to each participating student containing a minor assent document to be completed by minor students and removed by adult students, a demographic questionnaire, the Five Factor Wellness Inventory-Teenage Version, the

Student At-Risk Identification Scale-Student Questionnaire, the General Mattering Scale, and the Perceived Stress Scale.

There were 2 hypotheses considered in this study. First, a significant relationship was posited between the 5 second-order variables of wellness, perceived stress, mattering, and at-risk status for dropping out of high school. This hypothesis was supported with all variables correlating significantly. Second, an overall regression model with 7 predictors (the 5 second-order factors of wellness: creative self, coping self, social self, essential self, and physical self; perceived stress; and mattering) was expected to significantly predict at-risk status for dropping out of high school. Regression analysis revealed that the complete model including all seven predictor variables significantly predicted at-risk status for dropping out of high school,  $F(7, 167) = 12.89, p < .05$ . This model accounts for 35.1% of the variance in at-risk status for dropping out of high school. Thus, this hypothesis also was supported. These findings indicate that counselors should utilize skills and interventions that help students stay engaged in the academic process.

## DEDICATION

Frankl wrote that everyone has his or her own vocation or mission in life and must endeavor to carry out a concrete assignment that demands fulfillment. Because of this unique assignment, each individual has a specific opportunity and responsibility to implement the plan and purpose designed for one's own way. I embarked on this educational journey with confidence that my heavenly Father was at the helm of my life and was steering my ship in the direction of my ultimate purpose. Many times I felt overwhelmed with the demands of work, school, and family, yet I never considered giving up. This dedication and consistency would not have been possible without the encouragement of those who believed I was capable of accomplishing great exploits.

To the precious Holy Spirit for endowing me with knowledge from above and giving me comfort, peace, and wisdom.

To my husband, Douglas Hammond Lemon, for being my number-one cheerleader and for loving me unconditionally even when I was too busy to give back. For pushing me, for praying for me, for helping me, I will forever be grateful. You are my best friend and loving partner.

To my mom, Betty Louise Burchfield, I thank you for giving me a heart after God, a desire to be the best, and a knowing that success always comes with hard work. Finally, to my children, Jessica Lemon Wilkinson and Jacob Douglas Lemon, I want to thank you for your constant encouragement. You are wonderful, intelligent, creative,

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## CHAPTER I

### INTRODUCTION

The No Child Left Behind Act (U.S. Department of Education, 2002) and federal accountability standards for high schools have generated an increased interest regarding high school dropouts and the methodology by which dropout rates are assessed (Bryk, 2003; Losen, 2004; Swenson, 2003). Despite the efforts of school counselors to inform students of the risks and consequences of dropping out of school, America's Promise Alliance (2009) reported that approximately every 26 seconds a student decides to leave school prior to graduation. As a result, school dropout rates continue to be an issue of national concern, and the inability of educators and researchers to find means of effectively reducing this problem may be grounded in their approach to understanding the subject.

According to Stanley, Spradlin, and Plucker (2008), the attainment of a high school diploma is of immense value to the individual student, but it affects the graduate's community as well. Additionally, they go on to report that based on the U.S. Census data, people over the age of 25 without a high school diploma earned an average income of \$19,544 in 2005. This age group with a high school diploma earned an average income of \$26,968, while people with a bachelor's degree from college earned an average income of \$44,217. As important as these statistics are for the high school student, other reports have contributed additional information related to the effect of high school dropout on families. The Alliance for Excellent Education (2007) reported that families headed by a

high school graduate accumulate 10 times more wealth than families headed by a high school dropout. Also, the researchers stated that an additional \$74 billion dollars of wealth would be accumulated in the United States if heads of households had at least a high school diploma. An updated report by the Alliance for Excellent Education (2008) presented the following facts:

- Over the course of his or her lifetime, a high school dropout earns on average about \$260,000 less than a high school graduate.
- Dropouts from the Class of 2008 alone will cost the nation more than \$319 billion in lost wages over the course of their lifetimes.
- If the United States' dropouts from the Class of 2006 had graduated, the nation could have saved more than \$17 billion in Medicaid and expenditures for uninsured health care over the course of those young people's lifetimes.
- If U.S. high schools and colleges raise the graduation rates of Hispanic, African-American, and Native American students to the levels of white students by 2020, the potential increase in personal income would add more than \$310 billion to the U.S. economy.
- Increasing the graduation rate and college matriculation of male students in the United States by just 5% could lead to combined savings and revenue of almost \$8 billion each year by reducing crime-related costs.

To date, prior research on high school dropout has produced mixed results. In previous studies, the issue of high school dropout has focused on socioeconomic factors such as family income, parents' highest level of education, and race/ethnicity (Randolph, Fraser, & Orthner, 2006). Other researchers have focused on risk indicators such as academic performance, low socioeconomic status, and deviant behavior (Phelan, 1992;



Rumberger, 1987; Suh & Suh, 2007). While these factors certainly affect dropout rates, they do not provide answers as to how a child arrives at the decision to drop out. In addition, addressing the problems indicated by factors concerning family, academic performance, race, and behavior has not prevented an increase in the current rates of high school dropouts. As Amos (2008) stated, the United States is no longer “the world leader in graduating students from high school and college” (p. 3). He contended that a third of students will drop out before attaining a high school diploma. Understanding that all students do not exhibit the same family or school profiles, it might be wise for researchers to take a more holistic view and include an examination of unconventional psychosocial variables in their research. This would allow the application of prevention programs that were adapted to the needs of each individual student.

### **Unique Issues of the Dropout Problem**

While a limited focus has dominated the research on high school dropout, this study intends to strengthen the view that adolescents have psychosocial issues that not only affect their development within the educational system but also affect their decisions to drop out of school. For educators and counselors who are concerned with the ultimate well-being of students, strengthening early identification of at-risk status and understanding the emotional and wellness issues that contribute to this status may empower counselors to develop interventions and skills to help prevent students from making unwell decisions.

An additional area of high school dropout research concerns protective factors for adolescents at risk of school dropout (Lagana, 2004; Ludwig & Warren, 2009). The literature proposes that there are a number of factors that can provide protection in a

framework of risk. For example, McGraw, Moore, Fuller, and Bates (2008) stated, “A potential protective factor in handling the stresses of Year 12 in particular and adolescence in general is connectedness, which can be defined as a sense of being cared for, personally accepted, valued, and supported by others” (p. 27). Also, Werner (1994) stated that providing opportunities for young people to pursue individual interests promotes adaptive behaviors and influences cognitive and emotional patterns of belonging. Resnick, Harris, and Blum (1993) reported that three main protector factors for students are (a) family connectedness; (b) school connectedness, religious affiliation, or spirituality; and (c) belief in the norms of society. Using holistic resources and building on wellness processes are important strategies that can provide protection in a context of risk.

### **At-Risk Status**

A significant first step in any dropout prevention program is the identification of those students who are most likely to quit school, and many researchers have attempted to assess which students are, in fact, at risk of dropping out. Janosz, Blanc, Boulerice, and Tremblay (2000) categorized at-risk students as those who exhibit academic, behavioral, or attitudinal problems that lead to school dropout. According to Wells, Miller, and Clanton (1999), there are a variety of resources for assessing the risk status of students; however, most of these assessments reflect academic failures that the counselor and teacher already suspect.

In assessing this risk, it is important to use methodologies that identify at-risk status early in a student’s high school career. According to McKee, Melvin, Ditoro, and McKee (1998), it is best to assess for “potential dropout beginning with students who are

about 16 years of age—the age that most youth in the United States are legally free to exit public schools” (p. 24). In addition, the authors add that one should look for hidden variables among students who do not exhibit social or behavioral problems. Fraser (2004) stated scholars should be interested in the relationship between risk factors that lead to dropout and protective factors that promote school engagement and how these interactions affect dropout outcomes.

According to Suh, Suh, and Houston (2007), most of the research on at-risk students employs models that provide useful information, yet the authors found that these models are too broad to use the information to create and implement effective interventions. This researcher will examine the relationship between students’ at-risk status with risk factors from nontraditional measures (wellness, perceived stress, and mattering). This approach to dropout prevention is holistic in that it treats body, mind, spirit, and emotions in a way that will promote counselor understanding of student engagement and that will assist school counselors in creating a model that will provide specific pathways of intervention. As evidenced below, the variables of mattering and perceived stress were chosen for this study because previous research indicates they are important concepts in the lives of adolescents, and wellness factors were chosen as an alternative to a dysfunctional approach to high school dropout.

### **Holistic Wellness**

Rowley, Roesch, Bradford, and Vaughn (2005) stated that adolescence is a difficult time marked by many psychological, behavioral, emotional, and cognitive changes. To understand how changes in these areas affect the student, this study will investigate the important issue of high school dropout status from a holistic wellness

approach. This approach is based on the unity of the person and the importance of including aspects that affect the whole individual. Holistic wellness is best understood as a multidimensional method in which mind, body, and spirit are integrated in a purposeful manner with a goal of living life more fully (Myers, Sweeney, & Witmer, 2000). With this goal in mind, school counselors are better able to promote positive lifestyle changes that will help meet the wide range of developmental and remedial needs common among this age group. There is a long psychological history of viewing the person as a whole individual seeking “reciprocal actions of the mind on the body, for both of them are parts of the whole with which we should be concerned” (Adler, 1956, p. 255). Additionally, Maslow (1970) argued this same point through his belief that individuals strive toward human growth and life purpose.

For high school students, this self-actualization or wholeness may be enriched through motivating adolescents to be successful in school through personal, social, and career goals and to include graduating from high school as part of these goals. The evidence-based Indivisible Self Model of Wellness used in this study proposes five life tasks, which are interrelated and interconnected (Myers & Sweeney, 2004; Myers & Sweeney, 2005b; Myers & Sweeney, 2008). Hattie, Myers, and Sweeney (2004) stated, “These tasks are essence or spirituality, work and leisure, friendship, love, and self direction” (p. 355). By assessing these life tasks in relation to dropout identification status, the counselor may identify specific needs of students and address these needs with accurate interventions.

## **Mattering**

The health and well-being of adolescents is formed by the world in which they grow and by the people that support and encourage them. Those who are able to establish close relationships and develop a sense of belonging are more likely to have positive adjustment experiences resulting in healthier and happier lives (Newman, Lohman, & Newman, 2007). In order to attain healthy social and emotional development, adolescents have a need to matter to significant others and to feel valued and wanted (Dixon Rayle, 2006). As a result, it stands to reason that those who believe they matter will be motivated to make more well choices than those who lack a sense of connectedness with family, friends, and school (Dixon Rayle, 2006).

Many researchers hold the view that adolescents want to believe they are important, appreciated, and matter to others in their lives (Dixon Rayle & Myers, 2004; Marcus, 1991; Marshall, 2001). Dixon, Scheidgger, and McWhirter (2009) stated, “Perceived mattering to others is more than simply having regular contact with others; it represents individuals’ internal perceptions that they are important and that they matter to those people who are important in their lives” (p. 303). Mattering is extremely important for human development and social behavior. However, it is the perception of mattering that is important regardless of the objective indicators (Rosenberg & McCullough, 1981).

The educational theme of America has decreed that no child shall be left behind; however, many adolescents do not believe they matter to others and do not feel that they are valued at school (Dixon Rayle, 2005; Dixon Rayle & Myers, 2004). Assessing mattering in this study will provide indicators of psychosocial well-being and allow exploration of the relationship between feelings of mattering and high school completion.

## Perceived Stress

Gall (2008) indicated that social, economic, and academic pressures upon adolescents are creating a climate of fear, anxiety, and depression. Gall stated, “Many stressed-out adolescents don’t understand the purpose of the race they’re running or the value of the finish line that they are working so hard to reach” (p. 55). Students perceive their lives to be stressful and are lacking fewer coping skills than prior generations. Gall further stated, “American teenagers will tell you that they are on a first-name basis with stress, and scientific studies bear this out” (p. 25). She further added that students drop out of school because of a lack of motivation, inadequate personal coping skills, and lack of aspiration.

Perceived stress has been described as the association between the person and the environment that is judged by the person as taxing or exceeding his or her resources and causing danger to his or her well-being (Folkman & Lazarus, 1985). Failure to cope with the anxieties and difficulties in life can lead to poor choices by students. McCarthy, Seraphine, Matheny, and Curlette (2000) stated that many adults believe that the problems of adolescents are inconsequential compared with the weighty problems of adults. However, the authors added that children experience lower levels of locus of control and perceive life as more stressful. The score on the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) is being used to assess the relationship between the amount of stress students perceive to have in their lives and dropout status and will provide useful information in understanding the relationship among student dropout at-risk status and perceived stress.

## Statement of the Problem

The repercussions of dropping out of school can be long term and can create emotional pain and financial suffering. The decision to drop out of school not only affects the individual student, but this decision also has lasting outcomes on the student's family and community. Simpson (2006) reported that nearly a third of students who began as freshmen dropped out of high school, and that "at least 40 percent of students failed to graduate from the nation's 10 largest public districts" (p. 9). In the past decade, researchers examining school dropout have responded to this problem by assessing categories of at-risk factors that are designed to prevent academic failure and improve other school outcome problems such as absenteeism, deviant behavior, and social anxiety (Hickman, Bartholeomew, Mathwig, & Heinrick, 2008; Suh, Suh, & Houston, 2007). These factors have been shown to be statistically significant in predicting school dropout behavior; however, addressing these factors has not led to lower dropout rates. Amos (2008) stated that currently fewer than three in four students finish high school in 4 years or less and that male students, students from low-income families, minority students, and students with language, learning, and psychological disabilities have higher dropout rates. In the southeastern state of the sample population, the graduation rate has gone from 87% in 2007/2008 to 75.9% in 2008/2009. In the local school district of the sample participants, the graduation rate had dropped from 94% in 2007/2008 to 83.6% in 2008/2009. Clearly, there are other factors affecting dropout decisions that have not been fully realized, or research concerning this issue has not been effective (Chacko, 2007).

In evaluating much of the existing body of literature regarding dropout prevention, many factors have been offered to help explain why students decide to drop out of school. Within the counseling and educational literature, the past research variables

that show the strongest likelihood for offering such an explanation are the constructs of socioeconomic status, academic performance, and family characteristics. These variables have been examined separately and together in vast amounts of research (Bailey & Stegelin, 2003; Hickman & Garvey, 2006; Smink & Scharget, 2004). As Chacko (2007) discussed in her study of locus of control as a predictor of student dropout decisions, additional variables may account for the effects of dropout decisions and may provide answers for how a child arrives at the decision to drop out. She further adds that psychosocial factors may help clarify this process, and that this issue should be studied within a broader set of these factors. In order to develop more accurate theoretical models concerning the high school dropout problem, additional factors should be included. Overall, the problem is the gap in the educational and counseling literature documenting how well variables such as wellness, perceived stress, and mattering may contribute to the prediction of students who are at risk for dropping out of high school.

### **Purpose of the Study**

While demographic and academic variables are predictive of the likelihood of dropping out of high school, these variables do not provide sufficient answers for how a student arrives at the decision to drop out. In addition, these demographic and academic variables do not explain why some students with academic failures, poverty problems, and lack of strong family support remain in school. No published research to date has attempted to determine the explanatory and predictive importance of wellness, mattering, and perceived stress in an attempt to produce a profile of at-risk status. Specific research including these variables may increase educators' understanding of the characteristics most important in determining dropout decisions. This increased knowledge and addition



to the existing literature could aid in forming a foundation for future school and mental health counseling efforts when encouraging adolescents to successfully graduate from high school and strive to achieve a greater state of well-being and self-actualization.

Maslow (1968) stated the following:

We may define self-actualization as an episode, or a spurt in which the powers of the person come together in a particularly efficient and intensely enjoyable way, and in which he is more integrated and less split, more open for experience, more idiosyncratic, more perfectly expressive or spontaneous, or fully functioning, more creative, more humorous, more ego-transcending, more independent of lower needs, etc. He becomes in these episodes more truly himself, more perfectly actualizing his potentialities, closer to the core of his being, more fully human. (p. 97)

The purpose of this study was to explore specific variables that may contribute to a high risk status of dropping out of school among high school students. More specifically, the aim of this study was to determine whether students who may be at risk for dropout can be predicted by observing measures of wellness, perceived stress, and mattering. In order to more accurately explain and predict at-risk status of dropping out of high school, the following research questions were examined:

1. What are the levels of the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school?

2. What is the relationship among the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school?
3. To what extent can the variance in at-risk status for dropping out of high school be accounted for by the five second-order factors of wellness, perceived stress, and mattering?

In addition, the following hypotheses were tested:

Research Hypothesis 1: A significant relationship at the .05 alpha coefficient level will exist between the five second-order variables of wellness, perceived stress, mattering, and at-risk status for dropping out of high school.

Research Hypothesis 2: The regression model will result in an overall model in which seven predictors (five second-order factors of wellness, perceived stress, and mattering) significantly predict at-risk status for dropping out of high school at the .05 alpha coefficient level.

### **Limitations, Assumptions, and Design Controls**

#### **Limitations**

This study provides an examination of the five second-order factors of wellness, the attitudes of mattering, and the level of stress coping skills of adolescents in relation to at-risk status for dropping out of high school. The results of the study must be understood within the context of the limitations inherent in the design and implementation of the study. First, the use of a convenience sample may limit the generalizability of the results.

In this study, participants were recruited from a single high school in a southern rural setting, and student demographics may change from school to school even in the same school district. Furthermore, adolescents from other venues (private schools and inner city schools) will present with different profiles. Second, the students completing the instruments were students who are currently attending school. Additional studies designed to examine the research variables with students who had dropped out of school would be beneficial. Finally, the instruments used in the study were all self-report measures that depended upon accurate information from an adolescent population. Despite these limitations, this study may provide important information for counselors to understand underlying issues of dropout decisions and to create effective interventions to prevent students from making unwell decisions, which includes dropping out of school.

### **Assumptions**

Assumptions in this study include a belief that the students in this high school represent a cross section of adolescents who will reflect beliefs of the general population; an assurance that students will thoughtfully and carefully complete the data information and will provide insightful meaningful information; the instruments used in the study have been statistically tested and will yield the desired data; and the size of the sample and the diversity of the student population will increase the effectiveness of the results.

### **Design Controls**

Environmental variables were controlled by collecting the data from the students at the same time of day, in the same environment, with the same researcher. Also, the researcher carefully read the directions and allowed ample time to complete the instruments.

## Definition of Terms

1. **At-Risk Status:** At-risk students are those who exhibit academic, behavioral, or attitudinal problems that lead to school dropout and includes aspects of the student's background and environment that may lead to a higher risk of educational failure (Janosz, Blanc, Boulerice, & Tremblay, 2000; Suh, Suh, & Houston, 2007). For this study, at-risk status for high school dropout was measured by the Student At-Risk Identification Scale Student Questionnaire (SARIS; McKee, Melvin, Ditoro, & McKee, 1998).
2. **Wellness:** Holistic wellness is best understood as a multidimensional approach in which mind, body, and spirit are integrated in a purposeful manner with a goal of living life more fully (Myers, Sweeney, & Witmer, 2000). The five second-order factors (creative self, coping self, social self, essential self, and physical self) of the Five-Factor Wellness Inventory Teenage Version (5F-Wel-T; Myers & Sweeney, 2005) was used to measure this variable.
3. **Mattering:** This concept has been defined as the beliefs people have (right or wrong) that they matter to someone else, that they are the object of someone else's attention, and that others care about them and appreciate them (Scholssberg, Lynch, & Chickering, 1989). This concept was measured by obtaining scores on the General Mattering Scale (GMS; Marcus, 1991).
4. **Perceived Stress:** This is an outcome variable—measuring the experienced level of stress as a function of objective stressful events, coping processes, and personality factors (Cohen, Kamarck, & Mermelstein, 1983). Perceived stress was

measured in this study by obtaining scores on the Perceived Stress Scale (PSS; Cohen, Kamarch, & Mermelstein, 1983).

## CHAPTER II

### REVIEW OF RELATED LITERATURE

High school graduation may be one of the most important activities for adolescents as it carries with it the potential for financial, psychological, and social benefits. According to Woolley (2009), *dropout* is an incorrect word to use when students make the decision to quit school prior to graduation. He stated that high school dropout suggested something sudden or unexpected when actually many complex factors lead the student to make this decision and that the lack of success in school begins with a path influenced by these factors. In order to address this problem, it is important to explore and understand variables that may contribute to unwise decisions by high school students. In the past, various researchers have found a host of academic, behavioral, and family variables that contribute to student at-risk status for dropping out of high school (Boon & Cook, 2008; Duchesne, Vitaro, Larose, & Tremblay, 2008; Ellickson, Bui, Bell, & McGuigan, 1998; Englund, Egeland, & Collins, 2008; Pagani & Vitaro, 2008; Suh & Suh, 2006). To add to the existing research, this study examined nontraditional variables that look beyond academic failure to relational, sociological, interpersonal, and psychological issues. The literature review discusses these variables and includes relevant research concerning at-risk factors for dropping out of high school, concepts of adolescent wellness, psychosocial issues of adolescent attitudes of mattering, and the effects of perceived stress.

## **At-Risk Factors for Dropping out of High School**

Janosz, Blanc, Boulerice, and Tremblay (2000) defined at-risk students as those who exhibit academic, behavioral, or attitudinal problems that lead to school dropout. In addition, Suh, Suh, and Houston (2007) referred to the term *at risk* as “aspects of a student’s background and environment that may lead to a higher risk of her or his educational failure” (p. 196). In discussing the issues associated with defining at-risk students, Pallas (1989) noted that 20 years ago the problem concerned cultural deprivation and that to address the problem, students were provided with preschool compensatory enrichment. He further added that at a later time period at-risk status was thought to be a societal problem with the inability of social institutions to help students achieve their full human potential. The supposed cure was to restructure all the social institutions that educate youth. However, Pallas posits that none of these earlier perspectives adequately addressed the issue. He adds that currently a new definition is needed that conveys the full components of the problem including educational and social institutions, families, and communities. Today young people are still considered at risk if they receive inadequate or inappropriate educational experiences in the family, school, or community, yet now students have additional issues of unexpected social and psychological pathways toward high school dropout (Pagani, Vitaro, Tremblay, & McDuff, 2008).

Suh, Suh, and Houston (2007) stated, “For educators and counselors concerned with the well-being of society, school, and family, and, particularly, the individual student, identifying the predictors of high school failure is a critical task” (p. 196). Early identification is an important element in prevention strategies and intervention skills. Many researchers have attempted to identify factors that contribute to a student’s decision

to drop out of school early (Boon & Cook, 2008; Fortin, Marcotte, Potvin, Royer, & Joly, 2006; French & Conrad, 2001; Suh, Suh, & Houston, 2007). These factors were examined in a meta-analysis study on high school dropout predictors by Lemon (2009). The study discussed the magnitude of certain factors included in the research from 1998 to 2009 on dropout status. Students with low educational aspirations and lack of school engagement were predicted to be 22.18 times more likely to drop out of high school. In addition, factors such as free and reduced lunch, low grade point average, repeating a grade, and family adversity greatly increased the predicted odds that a student would leave school prior to graduation. Lemon added, “Some prominent predictor factors have been identified yet without specific actions as to how to decrease the odds of student dropout when these factors are present” (p. 14). In addition, the researcher indicated that many of these factors are broadly defined and could be masking more specific factors that would be easier to evaluate and address in prevention strategies.

Current efforts to address at-risk status factors have been concerned with the identification of characteristics associated with dropout risk, and these factors have been studied in various domains such as family, school, and community. For example, Boon and Cook (2008) studied the effect of father’s education, mother’s education, mother’s work status, and school suspension in relationship to high school dropout status. This study was conducted with 1,050 students aged 12–15 in three North Queensland urban high schools. The authors stated, “The specific hypothesis tested was that challenging behavior, indexed by suspensions, predicts low academic achievement or at-risk status, more strongly than SES or family structure variables” (p. 81). In their particular model, school suspension was found to be the only significant factor. Zvoch (2006) studied the same domains but looked at school issues such as being qualified as an English Language



Learner (ELL) or receiving free or reduced lunch. The data in this research study were derived from student and school records of a large school district in the southwestern United States and examined the records of more than 20,000 students in grades 9 through 12. The ELL status did not prove to be a significant factor; however, free and reduced lunch designation was highly significant with an odds ratio of 6.76.

Suh and Suh (2004) studied factors such as grade level, socioeconomic status, grade point average, and homework completion. The study used data collected by the National Center for Education Statistics and included 1,686 dropouts. This study found that being behind a grade level would increase a student's odds of dropping out by 2.24, while the other factors addressed in the study were all found to be nonsignificant. In addition to these studies, the specific research literature discussed as follows relates to at-risk factors for dropping out of high school.

Suh, Suh, and Houston (2007) attempted to identify key contributing factors to school dropout by studying three categories of at-risk students: (a) low grade point averages, (b) disciplinary suspensions, and (c) low socioeconomic backgrounds. The data used in the study were drawn from the National Longitudinal Survey of Youth 1997 and the U.S. Bureau of Labor Statistics, 2002. The researchers identified 4,327 adolescents who had either dropped out of school, who had returned to school to graduate, or who had received their GED. The study initially looked at 135 variables that were contributing factors to dropping out of school. After analysis, 20 variables were selected based on statistical significance with respect to school dropout behavior.

These 20 variables were used as the independent variables, with the dependent variable of *DROPOUT* representing student's dropout or completion of high school. For purposes of the logistic regression, the dependent variable was coded as 0 if the student

graduated from high school with a diploma and coded as 1 if the student was not enrolled in high school during the survey year. The results indicated that 14 of the 20 predictors were statistically significant ( $p < .01$ ). In addition, the results showed that *GPA* (grade point average), *SUSPD* (suspended students), and *SES* (low socioeconomic status) were strong predictors of *DROPOUT*. For example, the log odds of dropping out of school rise by 1.310 when the adolescent's high school grade point average falls. Interestingly, three other variables were found to be acceptable predictors and had large slope coefficients: *HGPRM* (highest education attainment of mother was high school or less), *BIO* (the student lived with both biological parents), *SEX* (first sexual experience occurred at age 15 or below), and *OPTIM* (optimistic about future). According to the authors, the entire regression model had a  $-2$  log likelihood ratio of 3427.4, which was significant ( $p < .001$ ); Nagelkerke  $R^2$  was .407. The model correctly predicted 81.7% of all adolescents' cases. These findings point to the need for school counselors to be knowledgeable about factors contributing to high school dropout and to create dropout prevention plans that help students achieve success in academic endeavors, career goals, and behavioral problems. In addition, the study identified the significance of students' attendance expectations and their levels of school engagement; however, no particular strategies beyond mentoring were included to address personal and social development that would enhance these aspirations.

Suh and Suh (2007) added to the above research topic by conducting a study with the purpose of not only identifying factors contributing to high school dropout but also achieving an additional understanding of the impact of these factors on a student's likelihood of dropping out of high school. These data were comprised of information from a national database, which originated from the National Longitudinal Survey of

Youth database from the U.S. Department of Labor. The participants were a sample of 9,000 youths who were 12 to 16 years of age. The Department of Labor conducted interviews with eligible youths and their parents in 1997 and released the data in August 2003. This study excluded 2,792 students who either were enrolled in high school or were obtaining a General Educational Development certificate. The screening process initially provided 16 significant predictors of high school dropout. They included (a) low grade point average in the eighth grade; (b) low socioeconomic status; (c) students who were suspended; (d) students' expectations to stay in school; (e) enrichment risk index; (f) number of days absent from school; (g) whether the student lived with both biological parents; (h) physical environment risk index; (i) first sexual experience at age 15 or prior; (j) number of household members; (k) percentage of peers planning to go to college; (l) residence in metropolitan area; (m) region; (n) positive perception toward teachers; (o) number of fights at school; and (p) if the student had been threatened with harm at school.

The analysis of the Suh and Suh (2007) study involved two models of predictors of school dropouts. Model 1 indicated a strong association between dropout and the risk factors of academic risk, low socioeconomic status, and behavioral problems. For example, academic risk increased the probability of dropping out by 115.9%, socioeconomic risk by 75%, and behavior risk by 77.5%. Model 2 indicated predictors of school dropouts when the number of risk factors is included as a predictor. This model showed that the odds ratio for students with more than one risk factor is the largest value, and as the number of risk factors increase, the odds of a student dropping out of high school also increase. According to the study, the dropout rate for students with one risk factor is 17.1%, for two risks factors it is 32.5%, and for three risks factors it is 47.7%.

This study concluded that early prevention and intervention strategies are critical in preventing students from dropping out of high school. In addition, this study indicates that targeting students with academic risks alone may not be an effective prevention plan. In developing a school-wide prevention plan, school counselors should be sensitive to the impact of these indicators and develop programs that aid students in effectively dealing with them. In addition, the findings of the study indicated a need for school counselors to assist students in understanding environmental causes that develop negative self-concepts and beliefs, which adversely impact schoolwork. The researchers did indicate that counselors may want to look at personal characteristics that would provide protection against these obstacles.

Additional research exploring family and school factors was conducted by Randolph, Fraser, and Orthner (2006). Their study indicated that many individual factors have been correlated with high school dropout but four have been shown to consistently predict dropout: gender and race as demographic factors, early school experiences, and school involvement. This study is based on the records of 668 youth in an urban district in a southeastern state. The youth were all from low-income households and eligible for Aid to Families with Dependent Children. The dependent variable is an interaction of two measures, which included number of days of school enrollment from the ninth grade until withdrawal and a dichotomous indicator of dropout status. The explanatory variables included the four abovementioned factors. For the school involvement factor, three separate variables were assessed: suspension, truancy, and extracurricular activity participation.

The low-income students in the study were at high risk for dropping out of school, and almost half (47%) dropped out by the end of the study. In the first model, the

influence of first-grade retention was examined, controlling for gender and race. The risk of adolescents who were retained in the first grade is 1.89, or 89% higher than for adolescents who were not retained. Results also indicated that African-American adolescents' dropout risk was only about 60% of the European-American adolescents. Gender differences were not indicated in the model. The second model incorporated measures of high school involvement, which included the proportion of days suspended and truant and involvement in extracurricular activities. Being suspended or truant increases the risk of dropout with the hazard ratios being 1.17 and 1.13 respectively. Extracurricular activity participation provides a strong protective effect for finishing high school, and adolescents who participate in school activities are one fourth as likely to drop out of school as those students who are not involved in activities. The study concluded that the impact of poverty, early school experiences, and school involvement were variables that greatly influenced dropout rates with adolescents. However, the authors stated that the findings could be affected by reasons that were not measured in the model and that some children seem to be resilient in the face of economic disadvantage. Exploration into psychosocial factors may provide insight into the personal and social issues that provide protective factors for students and affect the high school dropout issue.

Building upon prior research, Pagani, Vitaro, Tremblay, and McDuff (2008) conducted a study that examined childhood variables that tend to deflect life-course trajectories away from finishing high school. Three empirical risk factors were examined: having a mother who did not finish high school, being from a single-parent family in early childhood, and having repeated a grade in primary school. The study included a random sample of 6,397 children attending kindergarten in a public elementary school in

regions of the Canadian province of Quebec. An initial study was conducted to assess the behavior of targeted children in the classroom in the spring of 1986 and 1987. From this pool of participants, a sample was selected for a longitudinal study consisting of 2,000 children.

The dependent variable was measured by having successfully completed high school by the age of 21. The key independent variables were (a) maternal education (mother not finishing high school versus completion, mother reports), (b) early childhood single-parent family status (versus intact, mother reports), and (c) middle childhood history of academic failure (grade retention from kindergarten to Grade 6, or not, teacher reports). The variables used to investigate unexpected pathway were socioeconomic variables, parents' trouble with the law, child temperament, child behavior, and child supervision. The results of the study indicated that of the males in the study, 481 completed high school and 315 did not. Of the 796 males, 184 had mothers with less than a high school diploma, 36 were in a single-parent home at kindergarten, and 22 experienced grade retention during the primary school years. Of the males who had all three risk factors, none completed high school. There were 809 females in the study of which 637 completed high school while 172 did not. In this group, 205 had mothers with less than a high school diploma, 33 were in a single-parent family at kindergarten, and 12 experienced grade retention during primary school. Only one female with all three risk factors completed high school. The study concluded that it is important to study unexpected outcomes of high school dropouts and to initiate research that would explore variables that would increase understanding of adolescent populations.

Fortin, Marcotte, Potvin, Royer, and Joly (2006) saw the need to expand the research variables and added a social aspect to their research on school dropout while still

including personal and family factors. The study included 810 seventh-grade students from three cohorts attending feeder schools to the four high schools in three Quebec regions. The authors stated, “Participants came from the first year of an extensive longitudinal correlational nine year repeated-measure study focusing on adolescents’ school achievement and social adaptation” (p. 367). The *Decision* (Quirouette, 1988) questionnaire was used to identify students at risk of dropping out of school. Additional instrumentation included a social rating scale, a depression scale, delinquency questionnaires, parental style surveys, family surveys, parental participation follow-ups, and teacher’s attitudes.

A cluster analysis was performed after subgroup identification with clustering variables. In addition, discriminant analysis and one-way analysis of variance on the clustering variables and validation variables were conducted. The results indicated the final typology was developed with the three main contexts associated with school dropout risk: personal, family, and social contexts. At-risk students were categorized into four subgroups. These subgroups were (a) the Antisocial Covert Behavior Type, (b) the Uninterested in School Type, (c) the School and Social Adjustment Difficulties Type, and (d) the Depressive Type. Of the at-risk sample, 18.9% was represented in the Antisocial Covert Behavior Type. For these students, academic performance was good and teacher attitudes were positives; however, there were problems of antisocial behaviors such as gang fighting, petty theft, and vandalism. Family rules and organization for this group were nonexistent. The Uninterested in School Type represented 39.7% of the at-risk students for dropping out of high school. They lacked classroom motivation and received little emotional support from family or friends yet seemed to have a very good repertoire with social skills. The School and Social Adjustment Difficulties Type were composed of

30.5% of the at-risk sample. These students had the lowest mathematics scores, the highest levels of behavior problems, and the greatest chance of delinquency. The Depressive Type only represented 10.7% of the sample, and these students achieved average grades and indicated the lowest incidence of externalizing behavior problems.

The study indicated that students who were at risk for dropping out of high school had many more social and school adjustment problems. Specifically, the study showed that at-risk students obtained higher scores for depression and lower scores on the parental emotional support and family variables. In conclusion, the study supported the hypothesis that students at risk for dropping out form a heterogeneous population and suggest the existence of developmental and psychosocial pathways leading to potential school dropout.

Gleason and Dynarski (2002) conducted a study to analyze the effectiveness of widely used risk factors for identifying students who will actually drop out of school. The study selected a group of students at a point in time, measured their risk factors, and determined whether they would eventually drop out of school. The data were from the School Dropout Demonstration Assistance Program and provided information about students who were disadvantaged, diverse, and at high risk for dropping out. Baseline data were collected in the fall of 1992 from students in middle and high school in four different cities. Students were interviewed again in spring 1995, which was nearly 3 years after the baseline data. Baseline and follow-up data were collected for 2,672 middle school students and from 2,808 high school students.

Students were coded for each of the risk factors—a value of 1, if the student had the characteristic, and a value of 0, if the student did not. The risk factors included family background information, previous school experience, personal/psychological



characteristics, and adult responsibilities. The results indicated that none of the single risk factors effectively identified future dropouts among middle school students. The highest percentage of students had a risk factor of external locus of control, and these students had a dropout rate of 7% by the end of the ninth grade. Additional factors were high absenteeism and overage of 2 or more years for the student's grade. The high school analysis was much like that of the middle school. In the sample of 2,615 students, 15% of the students were dropouts. Again, none of the single risk factors effectively identified dropouts. Being 2 or more years older than the other students in their grade was generally the best predictor.

The conclusion of the study was that the task of predicting who drops out is more difficult than simply taking into account known risk factors. The study considered the reason the factors at the beginning of the seventh grade do not accurately predict who will drop out could be that these reasons may become evident only later. However, according to the study, regardless of the age of the student, these widely researched factors did not accurately predict dropout status.

Rowley, Roesch, Bradford, and Vaughn (2005) stated that adolescence is a difficult time marked by many psychological, behavioral, emotional, and cognitive changes. The research indicates that factors surrounding decisions to drop out of high school are complex, and significant gaps exist in providing new variables that incorporate a modern perspective to adolescent issues (Dixon Rayle & Myers, 2004; Hartwig & Myers, 2003). Coatsworth, Palen, Sharp, and Ferrer-Wreder (2006) stated, "All youths have strengths, talents, and interests that will help them thrive, develop a sense of well-being, and create a positive future" (p. 157). Therefore, to incorporate these strengths and sense of well-being, this study investigated dropout at-risk status from a holistic wellness

approach using protective factors. Woods (1995) stated, “Risk factors for dropping out of school exist in all life domains (i.e., individual family school, community, peer relations), and the likelihood of a student dropping out of school increases as these risk factors accumulate” (as cited by Christel, Jolivette, & Nelson, 2007, p. 326). Addressing aspects of wellness, perceived stress, and mattering will expand the literature and provide information on at-risk factors that have not been previously explored.

### **Wellness**

The purpose of this study was to expand predictor factors and include a nontraditional variable such as wellness in evaluating at-risk status. McLoughlin and Kubick (2004) stated that wellness addresses the reduction of disorders and disease as well as the enhancement of mental and physical health. In addition, the authors stated, “Wellness promotion would seem best to serve target populations by de-emphasizing disease model conceptualizations and embracing the enhancements of existing positive traits” (p. 132). Wellness is more than the absence of disease; it refers to an integration of mind, body, and spirit in a purposeful manner with the goal of living life more fully (Myers, Sweeney, & Witmer, 2000). Adolescence is a time in life marked with many stressful changes, which leaves this population susceptible to mental, emotional, or behavioral disorders: “This vulnerability could lead some to make unwell decisions that might lead to the emergence of such issues as depression, anxiety, eating disorders, substance abuse, and even suicidal ideation” (Watson & Lemon, 2009, in press). Integrating a holistic wellness approach when counseling adolescents may help school counselors facilitate strategies that would identify the unique strengths of students and

promote their individual empowerment to develop positive lifestyles, which encompasses attitudes for completing high school.

A new paradigm of wellness emerged during the 1990s “as an alternative to the traditional, illness-based medical model for treatment of mental and physical disorders” (Myers, Sweeney, & Witmer, 2000, p. 251). This paradigm included the complete person approach for improving the quality of life in proactive and positive ways (Witmer & Sweeney, 1992). This preventative approach has been embraced by counselors who are in a position to help individuals achieve mental and emotional wellness (Hattie, Myers, & Sweeney, 2004). In the past, counselors might have chosen from a variety of theoretical wellness models (Hettler, 1984; Hinds, 1983). Hattie, Myers, and Sweeney (2004) discussed the historical aspects of these wellness models. They stated that Hettler’s medical model specified six dimensions of healthy functioning. These dimensions included physical, emotional, social, intellectual, occupational, and spiritual aspects and influenced the creation of the Lifestyle Assessment Questionnaire (National Wellness Institute, 1983) and Testwell (National Wellness Institute, 1983). Another historical model of wellness is the Hinds (1983) Lifestyle Coping Inventory. This inventory was health based and assessed a variety of lifestyle and psychosocial habits that affect health. Erfurt, Foote, and Heirich (1991, as cited in Hattie, Myers, & Sweeney, 2004) noted, “The difficulty with these models for counseling-oriented professions is that each has a firm basis in health care rather than psychological development” (p. 354). More recent studies have developed wellness models for health care, spiritual wellness, and work wellness (Briggs & Shoffner, 2006; Fourie, Rothmann, Vijver, & Fons, 2007; Purdy & Dupey, 2005; Zimpfer, 1992). These emerging paradigms in health care, spirituality, and

the workforce have stressed the need for early prevention in the counseling field and the need to create and incorporate models of wellness into care for clients.

The Wheel of Wellness model proposed by Witmer, Sweeney, and Myers (1998) was the first theoretical model of wellness based on Adlerian Counseling Theory. In a new translation of his book, *Understanding Human Nature* (1998a), Adler stated the following:

The ever-present psychological goal that determines all of our activity also influences the choice, intensity, and activity of those particular psychological faculties that give shape and meaning to our picture of the world. . . . We all ignore the whole and value only that which is appropriate to our goal. Thus we cannot fully understand the behavior of any human being without a clear comprehension of the secret goal he or she is pursuing; nor can we evaluate every aspect of behavior until we know how this goal influences the whole activity. (p. 39)

The foundations of the Wheel of Wellness model resulted from this holistic theoretical perspective of personality; social, clinical, health, and developmental psychology; stress management; ecology; and contextualism. Using these multiple disciplines, wellness can be defined “as a way of life oriented toward optimal health and well-being in which body, mind, and spirit are integrated by the individual to live more fully within the human and natural community” (Myers, Sweeney, & Witmer, 2000, p. 252). The model further proposes that healthy functioning occurs on a developmental

continuum, and healthy behaviors at one point in life affect subsequent development and functioning as well. The intent of the model is to support the assumption that there are specific components of healthy functioning and that these components can be assessed as a viable area for counseling interventions.

This original model proposed five life tasks, which are illustrated in a wheel with spokes that are interrelated. These five tasks included in the wheel were spirituality, self-regulation, work, friendship, and love. Hattie, Myers, and Sweeney (1999) used an assessment instrument developed from this model and conducted a factor analysis on a sample of 3,000 people. Through this analysis, the life task of work was subdivided into task of work and leisure. In addition, Myers, Sweeney, and Witmer (2000) stated that after research and clinical practice, the task of self-regulation was renamed “self-direction,” and 12 subtasks were clearly defined. These 12 subtasks are (a) a sense of worth, (b) sense of control, (c) realistic beliefs, (d) emotional awareness and coping, (e) problem solving and creativity, (f) sense of humor, (g) nutrition, (h) exercise, (i) self care, (j) stress management, (k) gender identify, and (l) cultural identity. As suggested by this model, “the main components of the Wheel of Wellness include the major life task of work (defined to include the separate aspect of work and leisure), friendship, and love” (Myers, Luecht, & Sweeney, 2004, p. 195). Spirituality is depicted in the center of the model and is considered essential to healthy functioning.

Myers, Luecht, and Sweeney (2004) reexamine the theoretical and empirical model of the Wheel of Wellness using a completely new 3,993-person database. In their quest to provide a model that underscored the need to emphasize the holistic person, to understand the interaction between the whole and parts, and to promote the importance of social context, the IS-WEL (The Indivisible Self: An Evidence-Based Model of

Wellness) was created. Also instrumental in the creation of this new model was the Adlerian Counseling Theory philosophy of holism, which posits the individual (self) is indivisible and purposeful (Adler, 1956). This philosophy provided a structure of higher-order factors and identifiable subcomponents (Myers, Luecht, & Sweeney, 2004). In addition the researchers stated, “The contexts are more clearly defined and described in terms of local, institutional, global, and chronometrical components through which the individual affects and is affected by his or her environment” (Myers, Luecht, & Sweeney, 2004, p. 197).

According to Hattie, Myers, and Sweeney (2004), these higher-order factors and subcomponents are as follows:

The first factor, *Creative Self*, includes those scales related to the way we positively interpret our world (Problem Solving and Creativity, Sense of Control, Sense of Humor, Work, and Emotional Awareness). The second factor reflect our manner of coping (*Coping Self*) by using Realistic Beliefs, Leisure, Stress Management, and Sense of Worth. The third factor relates to our *Social Self* or how we connect with others (Friendship and Love). The fourth factor relates to our essence or *Essential Self* (Spirituality, Self Care, Gender Identity, and Cultural Identity). The fifth, and last, factor relates to our *Physical Self* or body attributes (Exercise and Nutrition). (p. 356)

In the Indivisible Self Wellness Model (Figure 2.1), wellness is the center or core of the wheel with the five second-order dimensions of creative self, coping self, social self, essential self, and physical self defining the rims (Hattie, Myers, & Sweeney, 2004). This strength-based, choice-oriented, multidimensional approach places emphasis on the interconnectedness of various dimensions of an individual's life. Therefore, this approach makes holistic wellness an ideal approach to use with an adolescent population as it meets their developmental needs and enhances their ability to make wise choices.

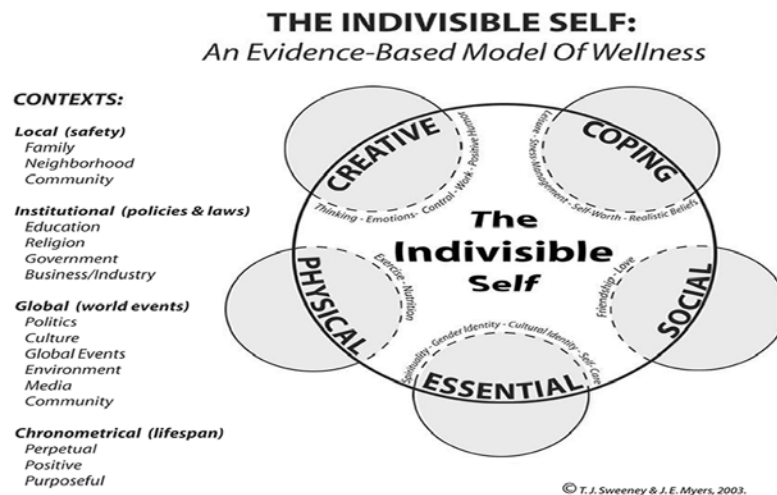


Figure 2.1 The Indivisible Self: An Evidence-Based Model of Wellness

*Note. From The Indivisible Self: An Evidence-Based Model of Wellness by T. J. Sweeney and J.E. Myers. Copyright 2003, 2009. Reprinted with permission.*

In reviewing the research literature, few studies have incorporated adolescent wellness as a study variable. However, Watson and Lemon (in press) conducted a study profiling adolescent wellness by applying the Indivisible Self Model of Wellness (IS-Wel; Myers, Luecht, & Sweeney, 2004) and using the Five Factor Wellness Inventory - Teenage Version (5F-Wel-T; Myers & Sweeney, 2005). The sample consisted of 114 help-seeking children and adolescents receiving counseling at a local mental health

facility. The participants ranged in age from 12 to 19 years and were equally representative of both genders. The study addressed the following research questions: What are the overall levels of wellness of help-seeking adolescents? How does the wellness of help-seeking adolescents compare with the wellness of adolescents in general? Are there within-group differences in wellness among the study participants based on age and gender?

To address the first research question, descriptive statistics were computed for each of the wellness factors, and means and standard deviations were computed for all full-scale and factor scores. This resulted in 22 of the 23 wellness factors having a positively skewed distribution. The second research question was addressed by conducting a series of univariate *t*-tests for each of the wellness factors comparing the study participants and an available norm group. Significant differences were found for 14 of the 23 factors using the adjusted significance level of .002. In the significant cases, the study participants scored lower than the available norm group. Effect sizes were found to be moderate to large, with Cohen's *d* indices ranging between .31 and 1.16 for the wellness factors. To address the third research question, a multivariate analysis of variance was computed to assess the effect of age and gender on wellness. The multivariate test indicated a significant effect for gender ( $F = 2.04, p = .01, \text{partial } \eta^2 = .353$ ). No significant results were found for either the main effect of age or the interaction effect between age and gender.

The study concluded that help-seeking adolescents perceive themselves to be less well than the general population of adolescents. Although DSM diagnoses were not addressed in the study, the assumption is that the participants were seeking help due to some type of emotional or relational problem. The results of this study could be



considered in regard to high school dropout students who experience lack of school engagement, low educational aspirations, family problems, economic problems, and lack of locus of control. These students could also be considered “not well” rather than not interested in school completion. The study also indicates that it seems appropriate that counselors working with adolescents would adopt a wellness approach to counseling: “By helping adolescents learn how to maintain optimal mental health early in life the likelihood that they will continue these lifestyle changes into adulthood is maximized” (Watson & Lemon, in press).

An additional study on adolescent wellness was conducted by Rayle and Myers (2004) to determine the influence of ethnic identity, acculturation, and mattering on wellness. Participants were students in grades 9 through 12 at a public high school in the Southeastern United States, and of the students participating, 176 were minority and 286 nonminority adolescents. The measures were five instruments used to create a structural wellness model. These included the Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992), the Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000), the General Mattering Scale (GMS; Marcus, 1991), the Mattering to Others Questionnaire (MTOQ; Marshall, 1998), the Wellness Evaluation of Lifestyle - Teenage Version (WEL-T; Myers & Sweeney, 2001), and a demographic questionnaire that included information on ethnicity, length of time participants had lived in the United States, and average time spent with family and friends.

The researchers tested all participants on a hypothesized three-factor structural model of ethnic identity, acculturation, and mattering as significantly predicting wellness. Then the participants were tested again separating the minority and nonminority groups of students. The model for all of the participants revealed adequate fit indexes with the

GFI at .96 and RMSEA of .07. The measurement model provided an acceptable fit to the data: ( $\chi^2$  (39,  $n = 462$ ) = 130.10,  $p \leq .01$ ; CFI = .93). Statistically significant paths were found between mattering and wellness and between acculturation and wellness in the model for all of the participants. In addition, mattering and acculturation significantly predicted wellness; however, ethnic identity did not significantly predict wellness. The minority model also provided an acceptable fit to the data: ( $\chi^2$  (39,  $n = 176$ ) = 24.61,  $p \leq .01$ ; CFI = 1.00). In this model, the path coefficients indicated that only ethnic identity accounted for a portion of variance in five of the six areas of wellness. The path coefficients between acculturation and wellness and between mattering and wellness for minority participants were all nonsignificant. Mattering and acculturation among the minority participants did not predict wellness.

The researchers concluded that wellness in adolescence entails areas such as spirituality, self-direction, schoolwork, leisure, love, and friendship. Participants indicated that a sense of mattering is the strongest predictor of their wellness in the six included areas. Self-direction, schoolwork, and friendship were the strongest areas of prediction between mattering and wellness. In addition, the researchers found that positive acculturation experiences were associated with higher levels of wellness for the minority students. Also, the researchers discussed implications for school counselors especially in the area of facilitating minority and non-minority adolescents' exploration of self, ethnic identity development, acculturation, mattering, and wellness. The authors suggest using formal and informal assessments as well as individual and group counseling. They stated that it is especially important to consider these variables in relation to the needs of minority youth and how these processes affect overall school retention and achievement (Rayle & Myers, 2004).

Weatherbee (2006) stated, “To effectively educate our young people, many educators and educational leaders have understood the need to address all aspects of child development both in terms of personal health needs as well as age and developmental stage appropriate curriculum” (p. 1). He further added that identifying the difference in health adjustment profiles is a critical step in understanding the causes of high school dropout. To understand the root causes of dropout, this researcher conducted a study to look not only at traditional predictors of high school dropout (academic achievement/grades, standardized tests, course failure, socioeconomic status, race, and ethnicity) but also at nontraditional outcomes (physical, social, and emotional health). By exploring these wellness factors, a better understanding can be obtained of dropout indicators, and early prevention and intervention programs for students at risk can be created.

The participants in the study consisted of two groups of students in a large school district in Ontario, Canada. The two groups were current high school students and former students (dropout group). The dropout group consisted of 92 dropouts between the ages of 15 and 21 (52.2% male; 47.8% female). Group 2 (non-dropouts) consisted of 429 students between the ages of 15 and 20 (46.9% male; 53.1% female). The data were collected through an online protected access to the Adolescent Development Screening Inventory for Education (ADSI-E), which is a survey designed to collect quantitative data across nine domains of health adjustment. Weatherbee (2006) stated, “A severity score for each domain was calculated by dividing the number of endorsements in the domain by the total number of items in the domain and then multiplying the score by 100” (p. 41). The results indicated that the overall score was significantly higher for dropouts ( $M = 55.66$ ,  $SD = 24.34$ ) than non-dropouts ( $M = 45.61$ ,  $SD = 20.56$ ). In addition, dropout

students had significantly higher scores across all domains except the Emotional Health domain  $F(1,493) = 3.716, p = .054$ .

The study utilized the ADSI-E as a means of quantifying constructs of student health and wellness. Also, the domains included in the study can be positively affected through targeted prevention and intervention programs for at-risk students. The author concluded that a joint educational venture between the responsibilities of education and public health would support a wellness approach to high school dropout.

In an article by Miller, Gilman, and Martens (2008), wellness promotion for school-aged children is examined through physical, behavioral, psychological, and social factors. The authors stated, “By developing interventions and prevention programs designed to promote both mental and physical health, school psychologists may contribute to positive youth development in a variety of domains, including greater school and life satisfaction, school engagement, and quality of life” (p. 6). The article focuses on three particular topics of wellness: the benefits of hope and optimism for children and youth, the potential utility of school-based, structured extracurricular activities, and applications of sport and exercise psychology.

To instill hope in children and protect against early school dropout among adolescents, one school-based intervention is the Penn Optimism Program (Shatte, Gillham, & Reivich, 2000). The program involves a 12-week, 24-hour intervention delivered to groups of 8 to 12 children by a trained leader. This program is characterized by use of cognitive-behavioral framework calibrated for developmental considerations. During the early session, five skills are taught: (a) A-B-C model of overcoming negative emotions, (b) the concept of explanatory style, (c) to dispute irrational thoughts, (d) to “decatastrophize” adverse events, and (e) the rapid-fire disputing of irrational thoughts

(Miller, Gillman, & Martens, 2008). Several studies have indicated this program is effective (Jaycox, Reivich, Gillham, & Seligman, 1994; Gillham & Reivich, 2004; Winder & Seligman, 2006). Although the program was created to treat depression and anxiety, the interventions are helpful in increasing hope, optimism, resiliency, and school completion (Reivich, Gillham, Chaplin, & Seligman, 2005).

The second wellness topic discussed in the article concerned the influence of participation in structured extracurricular activities upon adolescent wellness. The article stated that involvement in structured extracurricular activities presents a number of educational, interpersonal, physical, and psychological benefits to youth. Most research has centered on academic achievement; however, establishing meaningful connections with others has proven to be a key factor of psychological and interpersonal wellness (Baumeister & Leary, 1995).

The last wellness topic examined in the article was the use of sports and exercise in an adolescent wellness promotion. In a study by Crews, Lochbaum, and Landers (2004), a more rigorous aerobic exercise program created greater levels of self-esteem than a less rigorous one. Also, Haverly and Davison (2005) found that adolescents who are more physically active are more personally fulfilled, while other researchers have found that physical activity promotes social interaction, maturity, competence, and academic success (Fletcher, Nickerson, & Wright, 2003). In addition, sports and exercise in adolescents contribute to higher levels of locus of control (Gilman, 2001) and prosocial behaviors (Zaff, Moore, Papiool, & Williams, 2003).

As indicated by the above studies, a complete understanding of the individual student's lifestyle including behaviors and choices is important in creating a high school dropout prevention strategy. This wellness strategy would include issues of a local

context such as family, neighborhood, and community; a global context of politics, culture, and the student's environment; and an institutional context of education, religion, business, and the media (Sweeney & Myers, 2009). Understanding the relationship of wellness to at-risk status for high school dropout would add a creative and holistic factor to the model and allow an in-depth knowledge of the student's psychological, social, and physical health.

### **Perceived Stress**

As indicated by the discussion of at-risk factors concerning high school dropout, the ability to communicate, to interact effectively, to enjoy satisfaction with social interactions, and to possess adequate coping skills provides protective factors that enhance a student's ability to complete high school. In a study by Segrin, Hanzal, Donnersteil, Taylor, & Domschke (2007), the authors stated:

Now that a fairly reliable association between social skills and psychosocial well-being has been established, social scientists are beginning to turn their attention to variables that could potentially explain this association, and one phenomenon that could explain the association between social skills and well-being is the experience of stress. (p. 321)

Lazarus (2000) stated that adolescents are constantly faced with stressful conditions and they need both emotional and cognitive help to find solutions to their problems. Terry (2008) adds that at-risk students have unique stressors that contribute to their decision to drop out of school, and the inability to cope combined with little parental support, poor

body image issues, unfashionable clothing, and poor academic skills creates an atmosphere to make poor decisions concerning school completion. Perceived stress affects the ability of high school students to cope with the uncertainties in life and to navigate the changes that are necessary for growth and maturity and can be defined as “the degree to which situations in one’s life is appraised as stressful” (Myers & Degges-White, 2007, p. 100).

Cohen, Kamarck, and Mermelstein (1983) stated, “The impact of objectively stressful events is, to some degree, determined by one’s perceptions of their stressfulness” (p. 385). To develop a measurement of this theoretical perspective, these researchers conducted a study using two samples of college students and one group of participants aged 27 through 37 in a smoking-cessation group to test for reliability and validity of the Perceived Stress Scale (PSS). The first sample of college students consisted of 332 (121 male, 209 female, and 2 with sex not specified) freshman at the University of Oregon. All of the students gave permission allowing access to their student health records. The participants completed five scales: a life events scale, a social anxiety scale, a depressive symptom scale, a scale of physical symptoms, and the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983). The second sample consisted of 114 members of a personality psychology class (53 females and 60 males, with 1 not specifying sex). These students completed the same questionnaires. The last sample, a group involved in a smoking-cessation group, completed a life-event scale, a physical-symptom checklist, and the PSS.

According to the researchers, “Since perceived stress should generally increase with increases in objective cumulative stress levels, the PSS should be related to the number of life events” (p. 370). The results indicated small to moderate correlation

between number of life events and the PSS in all three samples. As far as the PSS versus life events as a predictor of symptoms, the data supported this cross-sectional correlation. However, the authors did state it was possible that increased symptoms caused increased stress rather than stress causing the symptomology. The researchers added, “Levels of perceived stress in college students, especially freshmen, should be related to their ability to become integrated into the university community. We would expect the poorer the integration, the greater the perceived stress” (p. 392). Both college samples indicated that increases in social anxiety were associated with increases in perceived stress (.37 and .38,  $p < .001$ ).

In addition, the study examined the role of the PSS as a predictor of maintenance of smoking-rate reduction. The perceived stress levels were assessed at the time of the study and at 1- and 3-month intervals. The article stated that the post-treatment data were collected by phone interviews and consisted of a four-item version of the longer survey. The results indicated that at 1 month the four-item scale correlated (.31,  $p < .001$ ) with the average number of cigarettes smoked per day; the four-item scale at 3 months was correlated (.37,  $p < .001$ ) with smoking rate at 3 months. The authors stated, “The greater the PSS score, the more cigarettes smoked” (p. 392).

In conclusion, Cohen, Kamarck, and Mermelstein (1983) stated, “The PSS can be used to determine whether appraised stress is an etiological (or risk) factor in behavioral disorders or disease, and it can also be used to look more closely at the process by which various moderators of the objective stressor/pathology relationship operate” (p. 393). According to the researchers, “The PSS can be used as an outcome variable, measuring people’s experienced levels of stress as a function of objective stressful events, coping resources, personality factors, etc.” (p. 393). This study indicates that the PSS can be



used to measure a different and independently predictive construct that would be useful in understanding the role of perceived stress in at-risk status for high school dropout. The items on the scale are designed to tap the degree to which participants find their lives unpredictable, uncontrollable, and overloaded. It is difficult to have positive beliefs and attitudes about school and higher achievement when one's life seems out of control.

In a study by Wadsworth et al. (2008), the authors tested a theoretical model concerning the effects of poverty-related stress on child and adolescent functioning. The researchers stated, "Poverty-related stress was associated with a wide range of correlates, including internalizing and externalizing syndromes, DSM-IV diagnostic symptoms, physical health, and deviant behavior such as pregnancy, legal problems, substance abuse, and school dropout" (p. 156). Understanding the lack of skills to cope with perceived stressors from living with poverty and actual stressors from life events is essential to creating successful intervention programs for adolescents.

Participants in the study were 82 adolescents and their primary caregivers. The subjects were drawn from the Colorado Project on Economic Strain at the University of Denver. A socioeconomic status survey was completed by parents, which included a report of their monthly income, their level of education, and their current occupation. In addition, parents and adolescents completed the Multicultural Events Schedule for Adolescents (MESA; Gonzales, Gunnoe, Samaniego, & Jackson, 1995). A poverty-related stress variable was computed from the following subscales: Economic Strain, Family Conflict, Family Transitions/Changes, Discrimination, and Victimization/Violence Exposure. In addition, symptoms of psychological disorders were obtained from diagnostic interviews using the Diagnostic Interview for Adolescents and Adults (DIAA; Achenback, 1997). Psychological symptoms were assessed from the

Child Behavior Checklist (CBCL; Achenbach, 1991a). Physical health, academic status, and deviant behaviors were assessed by individual questionnaires for each area. Through parent interviews, academic information was obtained for each student concerning grade point average, school engagement, study activities, and importance of school.

The study examined a series of path models, and each of the models contained only measured and continuous variables. In addition, multiple linear regressions were conducted to examine the possible moderating effects of age, sex, and ethnicity on the association between poverty-related stress and psychological and physical outcomes. The results of the analyses indicated that poverty-related stress was associated with all five syndromes as assessed by the CBCL. Anxious/depressed explained 22% of the variance, withdrawn explained 15% of the variance, 12 % of the variance was explained by somatic complaints, delinquent behavior explained 9%, and 7% of the variance was explained in aggressive behavior. In addition, parent education and occupational status were related to poverty-related stress and explained 8% of the variance.

In the moderator regression analyses, few significant interactions were found in the age by sex analyses: “On a measure of overall health, adolescent males had a significantly steeper slope than either pre-adolescent males ( $\Delta\beta = .533, p = .043$ ) or pre-adolescent females ( $\Delta\beta = -.833, p = .011$ )” (p. 176). The authors stated that African Americans in the study had fewer detrimental effects from poverty related stress, and Caucasians and Hispanics only differed significantly from each other on two measures: generalized anxiety disorder and more visits to the doctor or emergency room in the past 6 months.

In conclusion, “the study examined the relations between socioeconomic status, poverty-related stress, psychological functioning, deviant behavior, physical health, and

academic achievement in a sample of poor preadolescent and adolescent children” (Wadsworth et al., 2008, p. 176). The results indicated that immediate stressful life events and perceived stress by children of poverty-related issues are damaging to the physical and psychological well-being of adolescents and may contribute to school dropout.

A study by Magaya, Asner-Self, and Schreiber (2005) examined stress and coping strategies among Zimbabwean adolescents. The authors state that research on stress and coping strategies with a cultural focus for adolescents is scarce; therefore, the study was initiated to provide information for a multicultural intervention program for adolescents. The participants of the study were Zimbabwean high school students in three schools with students between 16 and 19 years of age. In the final analysis, 101 students completed the questionnaires. In addition to a demographic survey, the students completed the following measurements: the Perceived Stress Scale (PSS; Cohen, Kamarck, & Memelstein, 1983), the Ways of Coping Questionnaire (WCQ, Folkman & Lazarus, 1988), and the Social Provisions Scale (SPS; Russell & Cutrona, 1984). Descriptive statistics for all of the scales were calculated, and a multivariate analysis of variance (MANOVA) was conducted to determine the differences among stress, coping, and social support by gender, age, and grade level. Also, a multiple regression analysis was used to identify best predictors of perceived stress. The results of the MANOVA revealed no significant differences (Pillai's  $\Lambda = 0.70$   $F(1,99) = 1.64$ ,  $p < .01$ ). However, the researcher did report that females scored higher on the perceived stress levels suggesting that female adolescents are either experiencing more stress or are more willing to admit their lack of coping ability.

The final stage of the analysis was to determine the best predictor of perceived stress by including the following dependent variables: age, gender, educational level,

perceived social support, and emotion-focused and problem-solving coping. Gender was the only variable to significantly relate to perceived stress ( $\beta = 0.259$ ;  $SE = 1.242$ ). The authors conclude that Zimbabwean adolescents are under considerable stress related to school success, finances, interpersonal relationships, and issues of adolescent development. Also, the authors stated that these issues are faced by adolescents worldwide yet are magnified for these students with additional issues of an AIDS pandemic, prevailing poor economic conditions, and extreme competition in the school system. It is not a surprise that females scored higher on perceived stress levels as Zimbabwean society is male-dominated and cultural norms encourage males to deny the effects of stress.

Segrin, Hanzal, Donnerstein, Taylor, and Domschke (2007) conducted a study to explain the association between social skills and well-being. They stated, “Social skills were predicted to be associated with two indicators of psychological well-being: reduced symptoms of depression and life-satisfaction” (p. 321). In addition, social skills were predicted to be associated with a reduction in perceived stress and an increased level of life satisfaction. The study endeavored to understand why people with strong social skills feel less stressed by life’s challenges. The authors stated, “People with effective social skills are able to marshal support from their social network when faced with stressors, and this helps to minimize the impact of stress” (p. 322).

The participants in the study were 500 students from a large southwestern university. The range of age for the subjects was from 17 to 56 years with 40% males and 60% females. The ethnic distribution of the sample consisted of 2% American Indian, 6% Asian or Pacific Islander, 3% Black, 13% Hispanic, 73% White, and 4% other/unknown. The measures used in the used included the following: the Center for Epidemiologic

Studies - Depression Scale (Radloff, 1977), the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), the Social Skills Inventory (Riggio, 1986), the Life Experiences Survey (Sarason, Johnson, & Seigel, 1978), and the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).

Correlation coefficients were calculated for the association between all of the major variables in the study. The results indicated a nonsignificant association between social skills and objective indicators of life stress, as measured by an inventory of major life events, while social skills were significantly associated with a lower subjective appraisal of life stress,  $r(497) = -.22, p < .001$ . In addition, the results indicated that social skills were associated with better overall well-being as indicated by higher life satisfaction,  $r(497) = .27, p < .001$  and fewer depressive symptoms,  $r(487) = -.18, p < .001$ . The subjective and objective measures of stress were associated with higher depression and lower life satisfaction.

The study also conducted a multiple regression analysis to assess whether the social skills and well-being relationship is reduced when controlling for perceived stress. The results indicated that the social skill and depression relationship, which had shown a significant relationship, is reduced in magnitude and rendered nonsignificant ( $\beta = -.03$ , NS) by controlling for perceived stress. In this analysis, the test indicated a significant reduction in the social skills and well-being relationship by controlling for the effect of perceived stress,  $z = -4.86, p < .001$ . In addition, the analysis indicated that social skills are significantly associated with greater life satisfaction ( $\beta = .27, p < .001$ ); however, this association is reduced to  $\beta = .17, p < .001$  when there is a control for perceived stress. The interesting aspect of this study is that the evidence indicated no relationship between social skills and the stress experienced from negative life events. However, social skills

were associated with lower levels of perceived stress, and this reduction in perceived stress moderated symptoms of depression and levels of life satisfaction. It is of significance that a reduced perception of stress is an important element for young adults to face life's challenges without feeling overwhelmed.

As evidenced by the research concerning perceived stress, this variable plays an important role in the understanding of at-risk status for dropout concerning high school students. Students do not live in a vacuum and must face multiple challenges and adapt to numerous life events. Exploring this variable will enlighten counselors as to the extent perceived stress affects the at-risk status of high school students and will indicate if there is a need to include problem-solving and coping skills in a holistic dropout prevention plan.

### **Mattering**

Almost 30 years ago, Rosenberg and McCullough (1981) introduced the social psychology concept of mattering. The researchers hypothesized that all individuals understand varying awareness of general mattering (mattering in a broad sense to society) and of interpersonal mattering (mattering to specific other people). Elliott, Kao, and Grant (2004) stated, "Mattering is defined as the perception that, to some degree and in any of a variety of ways, we are a significant part of the world around us" (p. 339). Essentially, mattering is critical to our self-concept and to our view of how important we are to the world around us. When people believe they matter, they feel they belong and that others appreciate them (Corbiere & Amundson, 2007).

France and Finney (2009) added, "Rosenberg's concept of mattering directly related to Maslow's (1970) hierarchy of needs—specifically, the need to belong" (p.

104). After physiology and safety needs are satisfied, the need for belonging becomes apparent. In addition, the researchers stated, “However, there is an important distinction between belonging and mattering; namely, belonging to a group is not sufficient to elicit feelings of mattering. As such, one’s sense of mattering is more extreme than one’s sense of belonging” (p. 104). In applying this concept to adolescents in a high school setting, the students must not only be acknowledged but must also feel that they are important and that they make a significant contribution to the school environment (France & Finney, 2009). Dixon and Tucker (2008) stated that the concept of mattering complements the known knowledge of the adolescent lifespan, which includes changing emotions and questioning of self. The authors added, “In addition to the demands placed upon them by parents, teachers, friends, and society, children and adolescents struggle to form their individual identities while also navigating successful relationship in which they matter to their significant others” (p. 124). The need to matter seems to be a crucial aspect for adolescents and is of critical importance to identity development for this population (Dixon, Scheidegger, & Whirter, 2009).

Elliott, Kao, and Grant (2004) noted that mattering is important for developing self-identity, self-concept, sense of belonging, and understanding one’s purpose in life. If adolescents feel that no one is paying attention to them or no one is interested in them, they must try to cope with the realization that they do not matter to others. The authors further add that there are two categories of mattering: awareness and relationship. They stated, “Such awareness is purely cognitive: we matter in the merest of senses if others realize that we exist” (p. 340). In this fundamental way of mattering, we are distinguishable from others in a crowd and are noticed when we come and go. In addition, the authors stated that another category of mattering is relationship. In this

category, there are two distinguishable forms of mattering. Importance is the first form, and this form indicates that we are the object of someone's interest and concern. The second form focuses on reliance, and this aspect indicates that others look to us for the satisfaction of their needs or wants (Elliott, Kao, & Grant, 2004).

In addition, Elliott, Kao, and Grant (2004) constructed and validated a mattering index to measure this important construct and test its value in advancing an awareness of this self-concept. In this analysis, the researchers "analyzed a three-factor model for mattering, positing awareness, importance, and reliance as distinct but related unobserved factors; each factor was reflected in responses to the items from the corresponding index" (p. 343). The initial analysis was conducted on a questionnaire with 47 mattering items completed by 508 students from classes at a private college in New England. After the primary analysis, the researchers focused on the relationship to mattering of five constructs: self-consciousness, self-monitoring, self-esteem, alienation, and perceived social support.

The results indicated the goodness-of-fit statistic and Root Mean Square Residual for each of these factors: self-consciousness, .938 and .045, self-monitoring, .881 and .043; perceived social support, .943 and .026; and self-esteem and alienation, .913 and .036. The study concluded, "The associations between mattering and the constructs are as expected: mattering is positively related to self-esteem and perceived social support; it is negatively associated with all forms of self-consciousness and alienation; it is positively correlated with self-monitoring" (p. 349). The authors concluded that Rosenberg (Rosenberg & McCulloch, 1981) was correct in identifying the concept of mattering as an element in social psychology. They added that the scope of research concerning social



issues would benefit from including mattering is endless and that mattering is an issue that is integrally involved in a wide range of social phenomena.

One such social phenomenon affecting adolescents is the problem of suicide ideation. In a study by Elliott, Colangelo, and Gelles (2005), mattering is explored as an effect on this problem. The source of data is the 2000 Youth At-Risk Survey conducted by Schulman, Ronca, and Bucubalas, Inc. for the Center for the Study of Youth Policy at the University of Pennsylvania. The surveys were completed by telephone with 2,004 youths between ages 11 and 18 living at home. According to the researchers, the surveys included three major sections measuring youths' risky behavior, self-esteem and mattering, and readiness to change. Two items of the survey formed the basis for the dependent variable: "During the past 12 months, did you ever seriously consider attempting suicide?" and "During the past 12 months, did you ever seriously consider attempting some action you hope would cause your death by someone else?" A response of yes to both or either of the questions placed the respondent in the ideation category.

An index of items constructed by Elliott et al. (2004) was used to assess the mattering concept. The items were used to measure the respondents' perceptions of the degree to which they matter to their friends and family. All items of mattering were combined for a single index with possible scores ranging from 30 to 150 with a mean of 132.079 and a standard deviation of 13.001. The survey included nine items from Rosenberg's (1979) Self-Esteem Index. The potential range of scores was 9 to 45 with a mean level of 39.053 and a standard deviation of 5.616. Only one item was included for the variable of depression. This was a single question: "During the past 12 months did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you

stopped doing some usual activities?” Age, gender, and religiosity were all included in the data.

A logistic regression demonstrated a strong effect of mattering on suicide ideation: “The probability of suicide ideation for those at the mean level of mattering in our sample ( $M = 132.079$ ) is .186; this is the baseline probability for all future comparisons. The probability of suicide ideation rises as mattering scores fall below the mean, demonstrating the highly significant effect found in the analysis” (Elliott, Colangelo, & Gelles, 2005, p. 231).

The study concluded that mattering is one of the primary motivational elements of self-concept and that the lack of mattering has a powerful effect on suicide ideation. The authors stated, “Even with controls for other theoretically meaningful structural variables, the likelihood of suicide ideation decreases quickly as mattering increases” (p. 233). The researchers added that inculcating mattering in young people takes time and effort. Significant others, which include teachers and school counselors, must communicate to the student that his or her participation in the school environment is significant and welcome. In addition, the researchers stated that the study of mattering should be extended to other social–psychological situations with students such as use of alcohol, tobacco, violence, and school completion.

Developing meaningful relationships with people who provide a sense of mattering during adolescence may not only promote well-being in early life but also provide lifestyle attitudes that affect adulthood. A study by Dixon (2007) examined mattering in later years and the relationship among mattering, purpose in life, depression, and wellness. A total of 195 volunteers were asked to complete five instruments: a demographic form, the Interpersonal Mattering Scale (Dixon Rayle, 2005), the Purpose in

Life Test (Crumbaugh, 1968), the Geriatric Depression Rating Scale (Yesavage et al., 1983), and the Older Adult Wellness Evaluation (Dixon Rayle, 2006). Descriptive statistics for the study revealed low scores for overall wellness and perceived mattering to others. A multiple regression was conducted to assess the variance in overall wellness of mattering, purpose in life, and depression. These variables predicted 78.2% (adjusted  $R^2$ ) of the variance in overall wellness,  $F(3, 164) = 192.14, p = .000$ . The beta weights indicated the following: total mattering to others ( $\beta = -.19, t = 6.80, p = .000$ ), purpose in life ( $\beta = -.79, t = -19.90, p = .000$ ), and depression ( $\beta = -.23, t = -5.62, p = .000$ ). All significantly account for variance in older adults' overall wellness.

The study (Dixon, 2007) concluded that mattering is a social psychology concept that is important at all stages of life. The findings indicated that overall wellness for an older individual is greatly influenced by his or her perceptions of mattering to others. The author stated, "Although no previous research has highlighted older adults' perceptions of mattering to others, results with the older persons in this study indicated that they perceived that they mattered the most to their children, followed by their friends, and then their grandchildren" ( pp. 90–91).

In studying the aspect of mattering in adolescents, Dixon, Scheidegger, and McWhirter (2009) conducted a study to examine the effects of young adolescents' perceived mattering on their anxiety and depression levels. The participants in the study were 177 students in two public middle schools in a large southwestern city. The sample consisted of 125 females and 52 males. The measures used for the study included the following: the General Mattering Scale (GMS; Marcus & Kitayama, 1991) and the Beck Youth Inventories (BYI; Beck, Beck, & Jolly, 2001). Mann–Whitney  $U$  tests were conducted to investigate possible differences between female and male adolescents on the

three constructs. According to the researchers, there were no significant differences between female and male adolescents for perceived mattering ( $z = -1.39, p > .05$ ). However, the results did indicate significant differences in anxiety levels and depression. For the anxiety construct, the females had an average rank of 3.82 with 5.97 for the males. The results for the differences in depression were a rank of 3.85 for females and 5.89 for males.

In addition, a hierarchical multiple regression analysis exploring the question of whether perceived mattering moderates the relationship of anxiety and depression differently for female and male adolescents was conducted. The results indicated no significant main effect relationship between mattering and depression or between mattering and anxiety. However, the results did indicate significant interactions between mattering and gender for both depression and anxiety.

It is interesting to note that the study unexpectedly found no relationship among depression, anxiety, and mattering to others with this sample of young adolescents. The authors speculate that an inverse relationship may be occurring during early adolescence—higher anxiety and depression levels may be causing a reduction in mattering to others. Also, the study found that males had higher levels of depression and anxiety than females, which is a different picture from past research (American Psychiatric Association, 2000; Burt & Stein, 2002; Dixon Rayle, 2005b; Essau & Petermann, 2001; Taylor & Turner, 2001). However, the authors stated that the results should be considered with caution due to the unequal number of females to males in the sample population, and because few studies have focused on mattering with adolescents, future research is highly needed.

Indeed, few studies have been conducted using a mattering variable with an adolescent population; however, limited research has recognized that mattering to others is particularly important during this developmental time (Dixon Rayle & Myers, 2004; Marshall, 2001; Rosenberg, 1985; Rosenberg & McCullough, 1981). In addition, the research indicates that if adolescents perceive that they are important and matter to others, they may report lower anxiety and depression levels” (Dixon, Scheidegger, & McWhiter, 2009), greater wellness (Dixon Rayle, 2005), increased academic motivation (Dixon & Tucker, 2008), healthier ethnic identities (Rayle & Myers, 2004), and a greater sense of engagement in the school environment (Dixon & Tucker, 2008). In addition, Dixon and Tucker (2008) added, “Mattering is a foundational relationship concept that can bring individuals within a school together and can be integrated into a school counseling program’s philosophy and mission” ( p. 124). An important aspect of a school’s mission and accountability standards is to provide an atmosphere of acceptance and belonging in which a student may be successful and complete high school. When predicting high school dropout, this variable may enrich the research and indicate the degree to which this concept influences a student’s decision to drop out of school.

## CHAPTER III

### METHODOLOGY

This research analyzed the variables of the five second-order factors of wellness (creative self, coping self, social self, essential self, and physical self), perceived stress, and mattering as they relate to the at-risk status of students for dropping out of high school. Therefore, the goal of this research is to empirically explain the predictive value of each of these constructs for determining high school dropout at-risk status. This chapter is divided into five subsections: general research design, characteristics of the population and sample, procedures for participant recruitment and data collection, instrumentation, and statistical analysis.

#### **Research Design**

This research study describes and tests the existence of a predictive relationship among the included variables. In this analysis, the researcher was looking to obtain the regression equation that provides the best linear combination of independent variables, and their associated weights, in order to predict the at-risk status of students for dropping out of high school. This type of explanatory, non-experimental research is important for assisting researchers in recognizing possible predictor variables to explain observed variations in the factors that contribute to students' decisions to drop out of high school.

For the purpose of this study, multiple independent variables were used to analyze the existence of predictive relationships to the construct of student at-risk status of

dropping out of high school. These variables are the five second-order factors of wellness identified in the Indivisible Self Model of Wellness (creative self, physical self, coping self, social self, and essential self; Sweeney & Myers, 2009); perceived stress; and mattering. The research questions and hypotheses are as follows:

Research Question 1: What are the levels of the five second-order factors of wellness, perceived stress, mattering and at-risk status for dropping out of high school?

Research Question 2: What is the relationship among the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school?

Research Question 3: To what extent can the variance in at-risk status for dropping out of high school be accounted for by the five second-order factors of wellness, perceived stress, and mattering?

In addition, the following hypotheses were tested:

Research Hypothesis 1: A significant relationship at the .05 alpha level will exist among the variables of the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school.

Research Hypothesis 2: The regression model will result in an overall model in which seven predictors (the five second-order factors of wellness, perceived stress, and mattering) significantly predict at-risk status for dropping out of high school at the .05 alpha level.

### **Participants**

The participants for the proposed study consisted of high school students attending a mid-sized high school in the southeastern part of the United States in a community of approximately 6,000. The total enrollment of the school was 640 students with 52% males and 48% females. The racial distribution consisted of 18% African-American, 2% Hispanic, 1% Asian-American, and 79% White students. Descriptive analyses, which include means and standard deviations when appropriate, were conducted for the demographic variables of gender, age, race, and year in school. With regard to racial distribution of the sample participants, 18.3% were African American, 0.6% were Hispanic, 1.1% were Native American, and 80% were White. The discrepancy in the race category between the school demographics and the study results concerning the Native American designation may be explained by participants marking a biracial category in the study instrument, which must be marked as White in the school data. In addition, 43.5% of the participants were male and 56.6% were female.

Hair, Black, Babin, Anderson, and Tatham (2006) stated that the “sample size used in multiple regression is perhaps the single most influential element under the control of the researcher in designing the analysis” (p. 194). Tabachnick and Fidell (2001) created guidelines for establishing sample size for multiple regression analysis as



it relates to power, alpha level, number of independent variables, and expected effect size. According to these authors, when testing independent variables,  $N \geq 104 + m$ , where  $m$  = number of independent variables (five second-order wellness variables, mattering, and perceived stress); therefore, the present study required 111 participants. In addition, the authors stated that the guideline for testing  $R$ -square is  $N \geq 50 + 8m$ . Using this equation and the same variables, 113 participants were required. Tabachnick and Fidell (2001) also cautioned against too many cases because with a large number of cases the risk of deriving significance from the slightest variance increases. Using a convenience sampling method, the desired sample size for this study was at least 113 participants.

### **Instrumentation**

This study used multiple assessment instruments and a demographic questionnaire. These instruments included the Five Factor Wellness Inventory - Teenage Version (5F-Wel-T; Myers & Sweeney, 2005), the Student At-Risk Identification Scale - Student Questionnaire (SARIS-SQ; McKee, Melvin, Ditoro, & McKee, 1998), the General Mattering Scale (GMS; Marcus, 1991), the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), and a demographic questionnaire specifically developed for this study. All instruments are self-report survey questionnaires appropriate for the population in question.

#### **Five Factor Wellness Inventory - Teenage Version**

This instrument assesses a student's current state of wellness. It was developed through structural equation modeling and designed to assess the factors comprising the evidenced-based Indivisible Self Model of Wellness. These factors include a single

higher-order factor (Total Wellness), five second-order factors (creative self, coping self, social self, essential self, and physical self), and 17 third-order factors. This study only includes the five second-order factors as variables because these factors were used to analyze their relationship with dropout status and to create counseling interventions that address these particular areas. The teenage version of the 5F-Wel consists of two demographic items and 97 items rated on a four-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Examples of descriptive statements are (a) “I can laugh at myself”; (b) “I have at least one close relationship that is secure and lasting”; and (c) “I look forward to the work or schoolwork I do each day.” The raw scale scores were converted to a common metric using a linear transformation process. These transformed scales range between 25 and 100, with higher scores indicating higher levels of wellness. While the teenage version of the 5F-Wel is based on the original adult version and produces the same scale scores, its underlying factor structure has not been empirically tested. However, previous studies utilizing the teen version support the validity and reliability of the instrument for use with an adolescent population (Watson & Lemon, in press; Dixon Rayle & Myers, 2004). In the 5F-Wel test manual, Myers and Sweeney (2004) report an alpha coefficient of .91 for the single higher-order factor of Total Wellness and alpha coefficients ranging from .60 to .82 for the five second-order factors using the teen version.

### **Student At-Risk Identification Scale - Student Questionnaire**

The SARIS-SQ is a 16-item scale designed to identify the student who is at risk of dropping out of high school. This scale lists behaviors and conditions that are commonly associated with the potential dropout. The items included on the instrument were selected

based on published research on variables associated with dropping out of school. The scale includes both attitude and intention items, and these items were weighted based on a pilot study with students at Hillcrest High School in Tuscaloosa County, AL. This sample was 423 ninth- through eleventh-grade students at a predominantly middle-class suburban high school in Tuscaloosa County, Alabama. Examples of questions are (a) “Are you in the proper grade?” (b) “Have you been in trouble with the law?” and (c) “Whom do you live with?” Scores on each item were correlated with the total SQ score. All items correlated significantly with the total score except the item on attendance. Because the school had a very rigid attendance policy and because four other samples used in evaluating construct validity indicated that this issue was correlated with dropout, the item on attendance was retained.

The Hillcrest High School sample of 423 was used to calculate a Cronbach’s alpha of .70. A subsample of this group ( $N = 34$  ninth-graders) was retested after 3 to 4 weeks. Test–retest reliability was higher, with  $r = .86$ . Although the Cronbach’s alpha coefficient was modest, McKee, Melvin, Ditoro, and McKee (1998) note that a heterogeneous scale of this type tends to underestimate the reliability of this type of measure.

To further support the psychometric integrity of the instrument, all variables corresponding to test items were empirically associated with dropout rates—a strong indicator of content validity. For the 16-item SARIS-SQ, the content validity index was .47. A panel of educators rated the SQ form at 90% on the percentage of important predictive factors covered by the scale. Also, the panel rated the SQ scale’s overall worth on a Likert-type item, from 1 = Very Poor to 5 = Very Good. The mean rating was 4.5,

with 88% of the panel rating the SQ scale as good or very good (McKee, Melvin, Ditoro, & McKee, 1998).

Evidence for construct validity was provided by contrasting four samples, which differed in dropout risk. According to McKee, Melvin, Ditoro, and McKee (1998), the four samples were as follows:

- Alternative school students in the C.I.T.Y. program in Birmingham, AL (high risk)
- JTPA students from five Mississippi high schools who were academically deficient and of low socioeconomic status (moderate risk)
- Regular high school students in the Hillcrest High School sample in Tuscaloosa, AL (medium risk)
- A sample of 42 seventh- and eighth-grade students from St. Edwards Middle School (low risk)

As might be expected, the alternative school students exhibited higher mean scores than the JTPA sample. Also, the JTPA sample scored significantly higher than the Hillcrest sample, which in turn was higher than the low-risk St. Edward sample (McKee, Melvin, Ditoro, & McKee, 1998). In addition to these samples, other comparisons were conducted on students from four other schools. All eight groups provided evidence that there was a consistent distributional trend on SARIS scores.

### **General Mattering Scale**

This instrument was used to measure adolescents' feelings about how much they matter to other people and about the degree to which they perceive themselves to be important to others. This scale is based on Rosenberg and McCullough's (1981) model of

five components of mattering: (a) attention, (b) importance, (c) ego extension, (d) dependence, and (e) appreciation. The GMS consists of five items (e.g., “How much do you feel others would miss you if you went away?”) and asks participants to respond to each using a four-point Likert-type scale with values ranging from 1 (not at all) to 4 (very much). Scores on the GMS can range between 5 and 20, with higher scores indicating a greater sense of mattering. In a previous study involving a sample of 462 adolescents, Rayle and Myers (2004) reported a Cronbach’s alpha coefficient of .74 for the GMS. DeForge and Barclay (1997) found the GMS to be appropriate for research based on a study of 199 homeless males in Baltimore, MD. The study reported a Cronbach’s alpha of .85 for the GMS and concluded that the scale has considerable internal consistency.

### **Perceived Stress Scale**

This instrument was used in this study to measure adolescents’ perceptions of the degree to which situations in their life are appraised as stressful. The 10-item measure was designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen, Kamarck, & Mermelstein, 1983). The PSS consists of 10 items and asks participants to answer by using a five-point Likert scale, which ranges as follows: 0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often. PSS scores are obtained by reversing the scores on the four positive items( e.g., 0 = 4, 1 = 3, 2 = 2, etc.) and then summing across all 10 items. Items 4, 5, 7, and 8 are the positively stated items (e.g., “In the last month, how often have you been able to control irritations in your life?”). The scaled scores range from 0 to 40.

Three samples were used for original validation measures of the scale two consisting of college students and one consisting of a heterogeneous group enrolled in a

smoking-cessation program. The coefficient alpha reliability for the PSS was .84, .85, and .86 in each of the three samples. For test–retest validation, the PSS was given to one group after a 2-day period, and the correlation was .85; however, when given 6 weeks later to the individuals in the smoking study, the correlation was .55. This indicates that the treatment used in the program was effective in reducing stress.

Cohen, Kamarch, and Mermelstein (1983) stated, “Since perceived stress should generally increase with increases in objective cumulative stress levels, the PSS should be related to the number of life event” (p. 390). The PSS indicated adequate reliability and was correlated with life-event scores, depressive and physical symptoms, utilization of health services, social anxiety, and smoking-reduction maintenance. The PSS is brief and easy to administer and provides a tool for examining issues about the role of stress levels in the lives of adolescents.

### **Demographic Questionnaire**

The demographic questionnaire included items that asked participants to provide information relative to their sex, age, current grade level, race, employment level, father’s educational level, mother’s educational level, discipline records, absences during the last school year, current grade point average, birth order, and the individual with which the participant lives most of the time. The information obtained from these questions will be used to add additional variables that would expand factors concerning at-risk status for the sample of students.

### **Procedure**

Data collection occurred during the spring 2010 semester after receiving approval from the Institutional Review Board for the Protection of Humans in Research of

Mississippi State University. Prior to introducing the opportunity to participate to the students, informed consent agreements were distributed to the research population's parents or legal guardians. For those students who already were 18 years of age, they were directly given the adult student informed consent document. Once parental or student consent was obtained, the researcher compiled a list of participation-eligible students. Only the students on the list were allowed to participate in the data gathering process.

To gather data, the students were pulled from their advisor groups during regular school time. The researcher called for the eligible students by grade level to the school cafeteria. Prior to the distribution of any instrument packets, a disclosure statement contained in a Minor Assent Form was read to all potential participants informing them of what would be expected of them in this study; their rights as participants; and how data would be collected, analyzed, and stored. Those students who chose to continue with the process were given a packet while those that made the decision to withdraw from the study were given the option of either remaining quietly at their seat or returning to their advisor group at school.

The survey packets for minor students contained two copies of the Minor Assent Form, the SARIS-SQ, the Five Factor Wellness Inventory - Teenage Version, the Perceived Stress Scale, the General Mattering Scale, and a demographic questionnaire. Prior to beginning the data collection, minor participants were asked to carefully read the Minor Assent Document and to sign and date the document. All minor respondents were asked to remove one copy of their assent forms before turning in their packets, and adult students were asked to remove both copies. Two collection bins were placed at the front of the classroom for respondents to hand in a signed copy of the Minor Assent Form (one

copy was to be kept by the participant for his or her personal records) and completed instrument packets. Respondents were asked to place their surveys directly in the collection bins rather than having the researcher handle the materials.

Participants were informed that their participation in the study was voluntary and that they could stop at any time. In addition, this study was designed to protect students from any intentional physical, psychological, or social risks. However, students were debriefed immediately following data gathering and were encouraged to discuss any uncomfortable feelings that they might have concerning their participation with one of the school counselors.

### **Data Analysis**

Several preliminary analyses were conducted on the data set prior to initiating a multiple regression analysis. First, demographic information was analyzed in order to describe the participants and the overall sample. The statistics reported included frequencies, means, and standard deviations on all demographic data. Secondly, Cronbach alpha reliability coefficients were calculated for all study variables included in this sample. Finally, Pearson Product-Moment correlations between overall scores on the four primary instrument and subscales were computed for all participants.

The Statistical Package for the Social Sciences (SPSS, version 15.0) was used to conduct the multiple regression and subsequent analyses. Prior to running the regression analysis, preliminary analyses were conducted to screen the data for missing values and outliers and to evaluate the fulfillment of several test assumptions. First, the assumption of multicollinearity was checked by viewing collinearity charts containing a Variance Inflation Factor (VIF) and Tolerance. Linearity was then assessed through an



examination of the various bivariate scatterplots. Normality was evaluated through the assessment of the values for skewness, kurtosis, and Shapiro–Wilk’s  $W$  test. In addition, multivariate normality and homoscedasticity were examined through the generation of a residual plot within a preliminary regression.

Once preliminary analyses were completed, each research question was statistically analyzed. To evaluate the first research question (What are the levels of wellness, perceived stress, mattering, and at-risk status for dropping out of high school?), descriptive statistics were computed including means and standard deviations for all scales.

To evaluate the second research question (What is the relationship among wellness, perceived stress, mattering, and at-risk status for dropping out of high school?), Pearson product-moment correlations were calculated and a correlation matrix constructed to determine the relationship among the variables of wellness, perceived stress, mattering, and at-risk status for dropping out of high school.

To evaluate the third research question (To what extent can the variance in at-risk status for dropping out of high school be accounted for by wellness, perceived stress, and mattering?), a standard multiple regression analysis was conducted to examine the influence of several PVs on the DV of at-risk status. Hair, Black, Babin, Anderson, and Tatham (2006) stated, “Multiple regression analysis is a statistical technique that can be used to analyze the relationship between a single dependent (criterion) variable and several independent (predictor) variables” (p. 176). Multiple regression can ascertain that a set of independent variables explains a proportion of the variance in a dependent variable at a significant level (through a significance test of  $R^2$ ) and can additionally establish the predictive importance of the independent variables (by comparing beta

weights). The standard method was used because the study is exploratory, and there is no substantive knowledge as to which variable may be more influential. All predictor variables were entered into the analysis simultaneously. The predictor variables included the following: (a) five second-order wellness factors (creative self, coping self, social self, essential self, and physical self), (b) perceived stress, and (c) mattering. The effect of each of the predictor variables on the at-risk status for dropping out of high school score was assessed as if it had been entered into the equation after all other predictor variables had been entered (Mertler & Vannatta, 2005).

## CHAPTER IV

### RESULTS

The purpose of this study was to explore specific variables that may contribute to at-risk status of dropping out of high school. Understanding the emotional and wellness issues that play a role in this status may empower counselors to develop interventions and skills to prevent students from making unwell decisions related to their academic careers. More specifically, the aim of this study was to determine whether students who may be at risk for dropping out of high school can be predicted by observing the five second-order factors of wellness identified in the Indivisible Self Model of Wellness (creative self, physical self, coping self, social self, and essential self; Sweeney & Myers, 2009); mattering; and perceived stress. The following research questions were explored:

Research Question 1: What are the levels of the five second-order factors of wellness, perceived stress, mattering and at-risk status for dropping out of high school?

Research Question 2: What is the relationship among the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school?

Research Question 3: To what extent can the variance in at-risk status for dropping out of high school be accounted for by the five second-order factors of wellness, perceived stress, and mattering? In addition, the following hypotheses were tested:

In addition, the following hypotheses were tested:

Research Hypothesis 1: A significant relationship at the .05 alpha level will exist among the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school.

Research Hypothesis 2: The regression model will result in an overall model in which seven predictors (the five second-order factors of wellness, perceived stress, and mattering) significantly predict at-risk status for dropping out of high school at the .05 alpha level.

## **Descriptive Data**

### **Demographics and Frequencies**

A total of 207 students returned consent forms with 177 voluntarily choosing to participate. Of the 177 comprising the final sample, 77 were males (43.5%) and 100 were females (56.5%). The participants' ages ranged from 14 to 18 with a mean of 16.21 ( $SD = 1.36$ ). The lowest proportion of participants were age 14 with 23 students (13%), while

ages 15, 16, 17, and 18 were relatively consistent with 38 (21.5%), 35 (19.8%), 40 (22.6%), and 41 (23.2%), respectively. Freshmen made up the largest number of participants with 66 (37.3%). In addition, there were 17 sophomores (9.6%), 44 juniors (24.9%), and 50 seniors (28.2%). Racial distribution mirrored that of the student body as a whole. There were 141 (79.7%) White participants, 33 (18.6%) African-American participants, 1 (.6%) Hispanic participant, and 2 (1.1%) Native American participants. Two cases marked Native American on the demographic survey instrument yet marked biracial on the wellness inventory, which could explain the absence of Native American in the original school demographic information.

When asked about birth order, 61 participants (34.5%) indicated being the oldest child followed by 60 (33.9%) being the youngest child, 41 (23.2%) identifying as the middle child, and 15 (8.5%) reporting that they were the only child. Seventy-seven percent reported that they were not employed, while 16% indicated they were working part time (1–20 hours per week) and an additional 5% working part time (20–39 hours per week). Only 1% reported working full time (40+ hours per week) with an additional 1% not answering the question at all.

Demographics concerning father's education, mother's education, discipline records, grade point averages, absences during the last year, and living arrangements were also included. These variables were used to provide a better understanding of the participant's lifestyle and to give insight into the subject's educational actions. As reported in Table 4.1, more than 58% of fathers and 72% of mothers had at least some college education. It is also interesting to note that while almost 50% of participants had some type of discipline record, only about 12% indicated a GPA of less than 2.44. Finally, most participants reported living in a traditional setting with 71% living with

father and mother or with just mother alone. Table 4.1 presents the results of the frequencies and percentages for these demographic variables.

Table 4.1 Frequencies and Percentages of Responses to Demographic Questions

Demographic Variable	Frequency	%
<b>Father's Education</b>		
Less than high school	15	8.5
Some high school	58	32.8
Some college	56	31.6
College graduate	48	27.1
<b>Mother's Education</b>		
Less than high school	4	2.3
Some high school	44	24.9
Some college	54	30.5
College graduate	75	42.4
<b>Discipline</b>		
No record	90	50.8
Expelled from school	10	5.6
Suspended from school	27	15.3
Tardy 10 times or more	50	28.2
<b>Grade point average</b>		
3.01 – 4.00	104	58.8
2.50 – 3.00	52	29.4
2.00 – 2.44	19	10.7
Below 2.00	2	1.1
<b>Living arrangements</b>		
Father and mother	94	53.1
Mother only	32	18.1
Father only	10	5.6
Mother and stepfather	26	14.7
Father and stepmother	10	5.6
Other	5	2.8

Note:  $N = 177$ .

## Descriptives and Predictor Variables

Table 4.2 reports the mean ( $M$ ), standard deviation ( $SD$ ), minimum range, and maximum range for each of the predictor variables. The variable *perceived stress* is a measure of the level of stress appraised by a person that exceeds his or her ability to cope. The scaled scores had a possibility of ranging from 0 to 40 with scores in this study ranging from 2 to 36. Higher scores on this instrument indicated a greater perception of stress and inability to cope. The mean for this study was 19.14 ( $SD = 7.519$ ). Almost 46% of participants had a score of 18 or above indicating many of the participants perceived their lives to range from somewhat stressful to very stressful.

The variable *mattering* is a measure of the level of participants' beliefs that they are important and matter to others. Scores on this scale have a possibility of ranging from 5 to 20, and scores in this study were in that same possibility range. However, with this scale, higher numbers indicate a greater sense of mattering. The mean is 16.04 ( $SD = 3.06$ ), and 59.3% of the participants scored 16 or above indicating they felt a strong sense of mattering to others.

The other independent variables are the second-order factors of the Indivisible Self Model of Wellness (coping self, creative self, physical self, essential self, and social self; Sweeney & Myers, 2009). These indices of Wellness were measured across the five domains, with higher scores indicating a greater level of wellness. Scores on the wellness variables may range from 25 to 100, and minimum and maximum ranges for this study are indicated in Table 4.2. The variable *coping self* ( $M = 72.70$ ,  $SD = 7.58$ ) is composed of elements of realistic beliefs, stress management, and self-worth. *Creative self* ( $M = 78.47$ ,  $SD 10.07$ ) is composed of thinking, emotions, control, positive humor, and work. Exercise and nutrition compile the variable of *physical self* ( $M = 77.76$ ,  $SD = 14.63$ ), and

*essential self* ( $M = 81.74$ ,  $SD = 10.29$ ) includes spirituality, self care, gender identity, and cultural identity. Finally, *social self* ( $M = 80.86$ ,  $SD = 9.21$ ) comprises friendship and love.

Table 4.2 Descriptive Statistics for Independent Variables

Independent Variable	Range Minimum	Range Maximum	$M$	$SD$
Perceived Stress	2	36	19.14	7.51
Mattering	5	20	16.04	3.05
Coping Self	43.42	89.47	72.70	7.58
Creative Self	47.73	100.00	78.47	10.06
Physical Self	30.56	100.00	77.76	14.63
Essential Self	40.28	100.00	81.74	10.29
Social Self	45.45	93.18	80.86	9.21

Note:  $N = 177$ ,  $M = \text{mean}$ , and  $SD = \text{standard deviation}$ .

### Descriptives and Dependent Variable

The dependent variable *SARIS-SQ* is an indication of a participant's score for being at risk for dropping out of high school, and scores may range from 0 to 27. As reported in Table 4.3, the mean for this variable is 5.15 ( $SD = 3.837$ ). In this study, scores ranged from 0 to 18 with 133 (75%) participants scoring between 0 and 6, the range indicative of students who pose no risk for dropout. Thirty-seven participants (21%) scored in the risk range of 7 to 12, and 7 (4%) scored in the 13 to 18 high-risk range.

Table 4.3 Descriptive Statistics for the Dependent Variable

Independent Variable	Range Minimum	Range Maximum	$M$	$SD$
SARIS-SQ	0	18	5.15	3.83

Note:  $N = 177$ ,  $M = \text{mean}$ , and  $SD = \text{standard deviation}$ .



## Reliability Analyses

To examine the reliability of the instruments used in this study for this sample, Cronbach's alpha coefficients (Hair, Black, Babin, Anderson, & Tatham, 2006) were calculated to evaluate the internal consistency of each instrument scale. Table 4.4 presents the results of these analyses, which includes the reliability coefficients computed for each of the study variables and the original normed alpha coefficients for the instruments reported by the authors.

Table 4.4 Cronbach's Alpha Coefficients for Perceived Stress, Mattering, Creative Self, Social Self, Essential Self, Coping Self, Physical Self, and SARIS-SQ

Variable	Full Sample Study Alpha ( $\alpha$ )	Original Norm Alpha ( $\alpha$ )
Perceived Stress	.87	.85
Mattering	.86	.85
Creative Self	.89	.82
Social Self	.74	.62
Essential Self	.84	.77
Coping Self	.73	.60
Physical Self	.86	.76
SARIS-SQ	.75	.70

*Note:  $\alpha$  = Cronbach's alpha coefficients; SARIS-SQ = Student At-Risk Identification Scale - Student Questionnaire.*

## Testing of Research Hypotheses

### Hypothesis One

Hypothesis One suggests that a significant relationship at the .05 alpha level would exist among the variables of the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school. To test this hypothesis, Pearson product-moment correlations were computed and a correlation matrix constructed to evaluate the relationship among variables. As indicated by Table 4.5, all factors were significantly correlated with the second-order wellness factors being

the most highly correlated (coping self and creative self,  $r = .758, p < .01$ ; social self and creative self,  $r = .687, p < .01$ ; social self and coping self,  $r = .697, p < .01$ ; essential self and creative self,  $r = .709, p < .01$ ; essential self and coping self,  $r = .651, p < .01$ ; physical self and coping self,  $r = .612, p < .01$ ). These relationships would be expected because all are aspects of wellness. However, redundancy would not be a problem unless the values exceeded .80 (Mertler & Vannatta, 2005). Therefore, Hypothesis One was supported by the data.

Table 4.5 Correlations Among Predictor and Dependent Variables

Variable	S-SQ	Mattering	PStress	CrSelf	CpSelf	SSelf	ESelf	PSelf
S-SQ	1.00							
Mattering	-.23*	1.00						
PStress	.25*	-.28*	1.00					
CrSelf	.54*	-.49*	.38*	1.00				
CpSelf	.42*	-.55*	.34*	.76*	1.00			
SSelf	.41*	-.54*	.24*	.69*	.70*	1.00		
ESelf	.51*	-.43*	.21*	.71*	.65*	.54*	1.00	
PSelf	.32*	-.34*	.39*	.55*	.61*	.45*	.47*	1.00

Note: *S-SQ = Student At-Risk Identification Scale - Student Questionnaire, PStress = Perceived Stress, CrSelf = Creative Self, CpSelf = Coping Self, SSelf = Social Self, ESelf = Essential Self, and PSelf = Physical Self.*

\*  $p < .05$

## Hypothesis Two

Hypothesis Two suggests that the five second-order factors of wellness (creative self, coping self, social self, essential self, and physical self), mattering, and perceived

stress would account for a significant amount of variance in at-risk status for dropping out of high school held by participants. To test this hypothesis, a standard multiple regression analysis was conducted to determine the accuracy of the predictor variables (creative self, coping self, social self, essential self, physical self, perceived stress, and mattering) to predict at-risk status for dropping out of high school. Prior to data analysis, missing data were assessed for each entry on all study instruments prior to creating variables. Two values were missing on the wellness instrument, which were replaced using the mean substitution method for all valid responses for those particular questions. Assumptions were tested by examining normal probability plots of residuals, scatter diagrams of residual versus predicted residuals, and the Shapiro–Wilk’s statistical test for normality. The plots, diagrams, and test indicate some non-normal distributions; however, the distributions were not extreme, and the  $W$  values were all close to one. Thus, assumptions concerning multivariate normality, linearity, and homoscedasticity were assumed. Tolerance statistics and the variance inflation factor for each predictor were examined for multicollinearity. In this study, there were no tolerance values below 0.1 and no VIF values above 10; therefore, this assumption was not violated. Outliers were identified by calculating the Mahalanobis distance in a preliminary regression procedure. Two cases exceeded the chi-square value,  $\chi^2 (7, n = 177) = 24.32, p = .001$ . These two cases were deleted from further analyses.

Standard multiple regression was then conducted to determine which independent variables (creative self, coping self, social, self, essential self, and physical self; perceived stress; and mattering) were the predictors of at-risk status for dropping out of high school. Regression analysis revealed that the complete model including all seven predictor variables significantly predicted at-risk status for dropping out of high school,

$F(7, 167) = 12.89, p < .05$ .  $R^2$  for the model was .35, and adjusted  $R^2$  was .32. This model accounts for 35.1% of the variance in at-risk status for dropout. Table 4.6 displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients ( $\beta$ ) for each variable. In terms of individual relationships between the independent variables and at-risk for dropout status, *creative self* ( $t = 2.74, p < .05$ ) and *essential self* ( $t = 3.53, p < .05$ ) each significantly predicted at-risk status for high school dropout. In addition, the analysis indicated that the variables of *mattering*, *perceived stress*, *coping self*, *social self*, and *physical self* did not predict a significant portion of the variance in at-risk status for high school dropout. Figure 4.1 provides a graphic representation of the regression analysis. Based on the data, Hypothesis Two was supported.

Table 4.6 Summary of Regression Analysis for Variables Predicting At-Risk Status for High School Dropout

Variable	B	SE B	$\beta$	$t$
Mattering	.125	.099	.099	1.26
Perceived Stress	.049	.036	.096	1.37
Creative Stress	.122	.044	.314	2.74*
Coping Self	-.035	.055	-.072	-.63
Social Self	.038	.036	.100	1.05
Essential Self	.126	.036	.326	3.53*
Physical Self	-.003	.022	-.012	-.15

Note:  $N = 175$ .

\*  $p < .05$

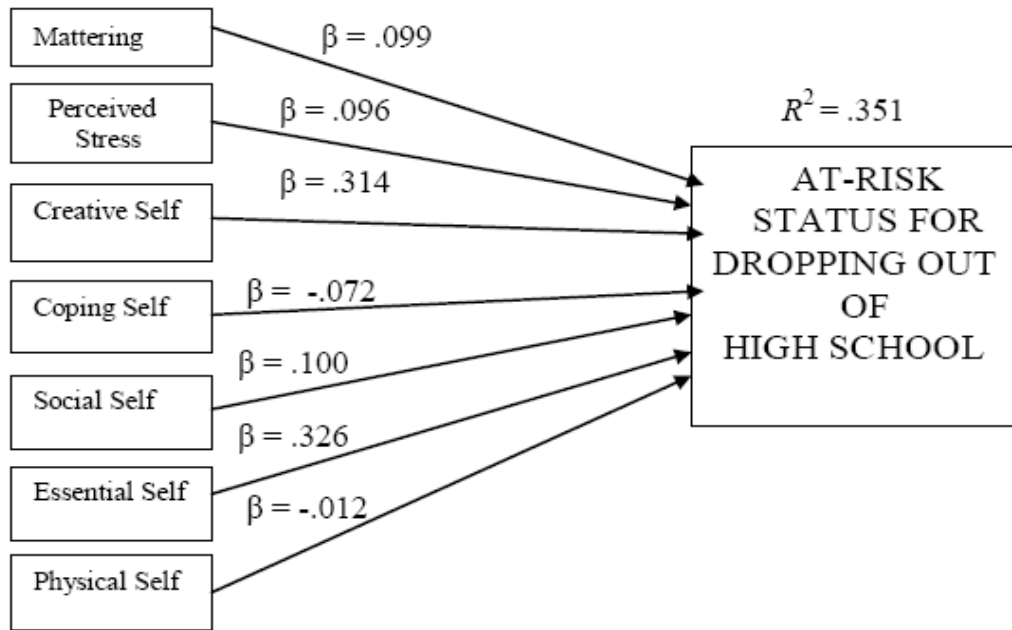


Figure 4.1 Hypothesized Model: Mattering, Perceived Stress, Creative Self, Coping Self, Social Self, Essential Self, and Physical Self on At-Risk Status for Dropping Out of High School

## CHAPTER V

### CONCLUSIONS

In this final chapter, the study results are summarized, a review of the findings from the statistical analysis of the data is presented, limitations are identified, and recommendations for future research are included. In addition, counseling implications and practical suggestions concerning the issues that have been raised in this study are stated. Finally, conclusions are drawn.

#### **Summary of the Study**

This study was conducted to address the gap in the educational and counseling literature concerning how well variables such as wellness, perceived stress, and mattering contribute to the prediction of students who are at risk for dropping out of high school. More specifically, the aim of this study was to determine whether students who may be at risk for dropping out of high school can be predicted by observing the five second-order factors of wellness identified in the Indivisible Self Model of Wellness (Sweeney & Myers, 2009; creative self, physical self, coping self, social self, and essential self), perceived stress, and mattering. Study participants were asked to complete a survey packet that included four instruments and a demographic questionnaire. The four instruments were the Five Factor Wellness Inventory - Teenage Version (5F-Wel-T; Myers & Sweeney, 2005), the Student At-Risk Identification Scale - Student Questionnaire (SARIS; McKee, Melvin, Ditoro, & McKee, 1998), the General Mattering

Scale (GMS; Marcus, 1991), and the Perceived Stress Scale (PSS; Cohen, Kamarch, & Mermelstein, 1983). Participants were selected from a convenient sample of high school students with the cooperation of the local school administrator, county superintendent, and local school board. The study was designed to protect students from any intentional physical, psychological, or social risks with responses being kept anonymous. Statistical analyses were conducted and the results reported in this study

### **Description of Sample**

The sample consisted of 175 students attending a mid-sized high school in the southeastern part of the United States in a community of approximately 6,000. With regards to racial distribution of the participants, 18.3% (n = 32) were African American, .6% (n = 1) were Hispanic, 1.1% (n = 2) were Native American, and 80% (n = 140) were White. The gender distribution was roughly equal with 43.5% (n = 76) of the participants being male and 56.6% (n = 99) being female.

### **Description of Study Variables**

The variable *perceived stress* is a measure of the level of environmental stress that is appraised by an individual to exceed his or her resources of well-being. The mean score of 19.14 ( $SD = 7.52$ ) was higher than the mean score of 13.02 ( $SD = 6.35$ ) reported by Cohen and Williamson (1988) in their normative study of 2,387 males and females, 18 years of age and older. When comparing this present study with the norm group, the perceived stress scores are much higher indicating that many of the participants in this study appraised their lives to be stressful. However, Cohen, and Williamson (1988) stated that PSS scores decrease as age increases, which would allow for some of the difference

in mean scores. Also, the norm mean is from a study that is 20 years old and would not account for societal changes that impact current adolescent developmental issues.

A more current study by Cordon, Brown, and Gibson (2009) explored the issue of perceived stress in the role of attachment style. In this study, college students were first asked to complete an attachment scale inventory to indicate which students could be grouped as secure or insecure. The 10-item PSS scale was then administered to the students, and secure students reported a mean of 18.08 with insecure students reporting a mean of 22.67. Using these scores as an indicator of comparison, the scores on this present study still indicated that many of the sample participants appraised their life to be somewhat to very stressful. In addition, 54.2% ( $n = 96$ ) of the participants' scores were above the median with a roughly normal distribution.

The variable *mattering* is a measure of the level of participants' beliefs that they are important and matter to others. These scores indicated 59.3% ( $n = 133$ ) of the participants scored above the median ( $M = 16.04$ ,  $SD = 3.07$ ) with a slightly negative skew. However, higher scores on this instrument indicate a stronger sense of significance to others. When comparing mattering scores on this study with a comparison study (Myers, 2001), participants scored significantly higher. These higher scores may be a product of various issues: the school maintains a positive culture with caring teachers; the community is small, rural, and interconnected; and religious youth organizations play a large role in the community.

The other independent variables are the second-order factors of the Indivisible Self Model of Wellness (coping self, creative self, physical self essential self, and social self; Sweeney & Myers, 2009). When comparing means of study participants with a 5F-WEL-T norm group (Watson & Lemon, in press), all of the mean scores for the study



participants were higher. These scores were coping self ( $M = 72.70$ ), creative self ( $M = 78.47$ ), physical self ( $M = 77.76$ ), essential self ( $M = 81.74$ ), and social self ( $M = 80.86$ ). The means for the norm group were as follows: coping self ( $M = 71.90$ ), creative self ( $M = 74.41$ ), physical self ( $M = 73.50$ ), essential self ( $M = 79.38$ ), and social self ( $M = 78.73$ ). These results are not surprising when considering the adolescent consent process to participate in the research study. Only 207 consent forms were returned of the 630 initially sent home to parents, and then only 177 students choose to participate when actually given the opportunity. It could be assumed that the final sample was composed of many students that fit into the mold of the more responsible student or of the student that enjoys participating in events and activities at school. Again, as stated in the discussion on mattering, the makeup of the community may affect wellness scores.

The dependent variable *SARIS-SQ* is an indication of a participant's score for being at risk for dropping out of high school. The mean for this scale was 5.15 ( $SD = 3.84$ ) with higher scores indicating a greater risk of dropout. When presenting comparative statistics for the *SARIS-SQ*, five samples differing in dropout risk can be utilized. St. Edwards School, a private Catholic school, in Connecticut conducted a study using this instrument and reported a very low risk of student dropout ( $M = 2.8$ ). Two samples of students with moderate risk, regular students who failed the State Competency Test attending West Central High School in Tuscaloosa, AL, and a combined sample of academically deficient students in five Mississippi high schools, reported means on the *SARIS-SQ* of 5.5 and 5.7, respectively. Samples of high risk indication on the *SARIS-SQ* were alternative school students in the C.I.T.Y program in Birmingham, AL, ( $M = 9.3$ ) and students two or more grades behind in the Program Future in Tuscaloosa, AL ( $M = 9.9$ ). When digesting this information, it becomes apparent that the mean score of at-risk

status for dropout for this study is in the moderate risk; however, the sample participants were not considered academically deficient, nor were the participants a segregated sample of students with failures on the state test. Thus, the mean score was high for regular students in a community school. Furthermore, the results indicate that 21% ( $n = 37$ ) of the participants were considered at risk for dropout and 4% ( $n = 7$ ) were at high risk. These findings are consistent with related literature that this issue is paramount in understanding educational failure (Christle, Jolivet, & Nelson, 2007; McGraw, Moore, Fuller, & Bates, 2008; Pagani, Vitaro, Tremblay, & McDuff, 2008; Suh, Suh, & Houston, 2007).

### **Analysis of Research Hypotheses**

#### **Research Hypothesis One**

Hypothesis One suggested that a significant relationship at the .05 alpha level would exist between the variables of the five second-order factors of wellness, perceived stress, mattering, and at-risk status for dropping out of high school. A relationship between the variables was suggested in the literature based on findings that a number of personal, biological, and psychological factors affect a student's ability to finish high school (Boon & Cook, 2008; Hickman, Bartholomew, Mathwig, & Heinrich, 2008). A correlation matrix was constructed to test the relationship between all study variables.

Specifically, a significant positive relationship existed among all five wellness variables. These relationships are not surprising in that the wellness model (The Indivisible Self: An Evidence-Based Model of Wellness; Sweeney & Myers, 2009) used in this study incorporates a holistic and developmental orientation, which postulates that changes in one area of wellness affect other areas; furthermore, the model is based on

five life tasks that are interrelated and interconnected (Myers, Sweeney, & Witmer, 2000).

In addition, a significant positive relationship was found between all five second-order factors of wellness and perceived stress. Myers, Sweeney, and Witmer (2000) define wellness “as a way of life oriented toward optimal health and well-being in which body, mind, and spirit are integrated by the individual to live more fully within the human and natural community” (p. 252). As indicated by these relationships, these findings were surprising when considering this definition. Students who indicated high wellness scores also indicated high perceived stress scores. This could be due to developmental issues with adolescents, which postulates that the adolescent stage of life is a stressful time regardless of other life events (Hickman, Bartholomew, Mathwig, & Heinrick, 2008; Duchesne, Vitaro, Larose, Tremblay, 2008). It may also indicate that the sample participants perceived their lives to be stressful and lacking in coping skills even though they are not experiencing current stressful life situations.

A positive significant relationship was also found between the five second-order factors of wellness and the *SARIS-SQ*. Because the *SARIS-SQ* is an indicator of at-risk status for dropping out of high school, these relationships are of particular importance to this study. In the past, most dropout prevention programs have focused on dysfunction—academic deficiencies, family problems, and socioeconomic issues. However, these positive correlations suggest that students who score high on at-risk status for dropping out of high school are creative individuals with specific desires to have control over their own destiny. Thus, these findings indicate these at-risk students are not being academically engaged by utilizing their intellectual, spiritual, social, and emotional strengths.

Finally, a significant positive correlation was found between perceived stress and SARIS-SQ. As indicated in the previous paragraph, the SARIS-SQ is an indicator of at-risk status for dropout, and the positive relationship between these two variables is not surprising as psychological well-being is associated with an adolescent's ability to make wise decisions. Perceived stress is an indicator of how unpredictable, uncontrollable, and overloaded respondents find their lives (Cohen & Williamson, 1988). When students perceive their lives to be out of control, they have little care for educational endeavors and long-term goals.

An interesting finding is that of a significant negative correlation found between mattering and all other study variables. The negative correlation between mattering and perceived stress was not a surprise because literature indicates that adolescents need to feel as if they belong and to form and maintain important relationships with others (Dixon, Scheidegger, & McWhirter, 2009). These findings indicate that students who believe they are important and significant to others are more able to cope with environmental stressors. In addition, a significant negative correlation was found between mattering and the SARIS-SQ. These findings indicate that students who feel they are important and believe they make a significant contribution to the school environment are protected from at-risk status for dropping out of high school. Furthermore, the results emphasize the need for counselors, teachers, and administrators to enhance the educational environment with interventions, skills, and curriculum that promote perceptions of mattering to students. The significant negative correlation between mattering and wellness was a surprise; however, this may indicate a distorted sense of mattering with this current generation of adolescents, which is fulfilled through technological social interactions. Social media may be an issue to explore concerning the

relationship between mattering and wellness. Disalvo (2010) stated that social capital boosts self-esteem and causes greater confidence, yet real-world relationships are being diluted.

### **Research Hypothesis Two**

Hypothesis Two suggested that the five second-order factors of wellness (creative self, coping self, social self, essential self, and physical self), mattering, and perceived stress would account for a significant amount of variance in at-risk status for dropping out of high school. A standard multiple regression analysis employing the forced entry method was used to determine the amount of variance in SARIS-SQ accounted for by the predictor variables. The overall model accounted for 35.1% of the variance in the at-risk status for dropping out of high school. This overall percentage was statistically significant ( $R^2 = .35$ ,  $F(7, 167) = 12.89$ ,  $p < .05$ ), thus supporting the acceptance of Hypothesis Two.

In terms of individual relationships between the predictor variables and at-risk status for dropping out of high school, significant beta coefficients were found for the factors of *creative self* (.31) and *essential self* (.33). In addition, the analysis indicated that the variables of *mattering*, *perceived stress*, and three of the five second-order variables of wellness (*coping self*, *social self*, and *physical self*) did not predict a significant portion of the variance in at-risk status for dropping out of high school.

The significance of the variable *creative self* indicates there is a relationship between at-risk status for dropping out of high school and the attributes that each student forms to make a unique place among others within his or her social interactions (Sweeney, 2009). This process involves emotional experiences and cognitive responses

that place the individual's personality into his or her hands. Sweeney stated, "There are five components to this factor: thinking, emotions, control, work, and positive humor" (p. 39). In relation to dropping out of high school, the student's thinking and emotions lead to aims and goals that may not include high school graduation. However, this is not a passive effort but includes the freedom to act, determine one's fate, and affect one's lifestyle. The way a student interprets personal abilities and environmental factors makes up the foundation of attitudes toward school and life in general. In addition, this finding indicates that at-risk status for dropping out of high school is affected by being satisfied with one's work at school, by feeling that one's skills are used appropriately, and by being able to enjoy the inconsistencies of life and use humor to accomplish serious tasks (Myers & Sweeney, 2005c).

The significance of the variable *essential self* is very interesting when considering the current educational climate. Sweeney (2009) stated, "The essential self is comprised of four components: spirituality, self-care, gender identity, and cultural identity" (p. 40). Educators are reluctant to discuss the spiritual, the existential, the search for meaning, or the metaphysical in the classroom. However, these findings indicate that these life tasks are related to at-risk status for dropping out of high school. Unconsciously, each student develops a personal image that guides his or her relationship to others, to his or her God or higher power, and to the universe. Students who are at-risk for dropping out of high school are searching for purpose, meaning, and freedom. Also, these findings indicate that students who may make decisions to leave the traditional school setting are free-willing, creative, striving, and becoming (Mosal & Dreikurs, 2000). Adler (1963) wrote, "I would like to stress that the life of the human soul is not a being but a becoming!" (p. ix). This paints a very different picture of why students look to other venues rather than

traditional education to meet their creative and existential needs. Thus, the results of this study posit that school curriculum should be infused with existential lessons that promote meaning, purpose of life, and service to God or a higher power. In addition, students should be encouraged to make a psychological investment in education and become a prophet of his or her future. Likewise, school counselors should address spiritual aspects of student lifestyle, include interventions that would promote existential thinking, and focus on individual strengths and resources of each student.

### **Limitations**

The results of this study must be understood within the context of the limitations inherent in the design and implementation of the study. Limitations exist that relate to sampling and instrumentation and are addressed in order to promote a better analysis of future studies in this area of research.

### **Sampling**

In interpreting the data, the use of a convenience sample may possibly limit the generalizability of the results. Participants were recruited from a single high school in a southern rural setting, and student demographics may change from school to school even in the same school district. Furthermore, adolescents from other venues (private schools and inner city schools) will present with different profiles. Also, the simple process of gathering consent forms in this study may have limited the sample to a more “well” group of participants. Future studies would benefit from using a combined sample from various schools with a greater emphasis on parental consent with the less involved students.

## **Instrumentation**

First, the instruments used in this study were all self-report measures that depended on accurate information from an adolescent population. There is a tendency for participants, especially adolescents, to self report socially desirable answers. However, the researcher was very careful to emphasize to the participants that there were no right or wrong answers. In addition, every reasonable measure was taken to protect the confidentiality of all study participants, thereby empowering the participants to be truthful. Secondly, even though the perceived stress and mattering scales yielded high Cronbach alpha coefficients for this study, .87 and .86, respectively, the instruments were developed over 20 years ago and may not accurately reflect current attitudes and trends. In addition, it was difficult to find current norm groups for mean comparisons.

## **Recommendations for Future Research**

Additional research is needed to substantiate and broaden the current findings relative to the relationship among wellness, mattering, perceived stress, and at-risk status for dropping out of high school. For example, exploring further issues of mattering, wellness, and social media may provide new insights into the current worldview of adolescents. Technology has muddied the waters of social psychology and created a vast chasm in understanding the all-important social element in the lifestyle of high school students. Likewise, further research concerning perceived stress among high school students may provide a better understanding of the lack of coping skills evidenced in this population.

More importantly, this study indicated that components of wellness are critical considerations in the high school dropout issue, and these findings provide a foundation for future studies. Further examination of the third-order factors underlying the variables



of wellness used in this study would build upon this foundation and would prove useful in determining which of these underlying factors are most influential in predicting the potential for high school dropout. In addition, further studies addressing wellness in relationship to high school dropout by grade level, gender, birth order, and ethnicity would be beneficial to this area of research.

Finally, research concerning the effects of contextual variables on adolescent wellness, perceived stress, and mattering would provide greater understanding of environmental factors that influence high school dropout. For example, longitudinal studies would reveal if interventions created a positive and purposeful change in school completion attitudes and status. In addition, to add to the holistic functioning of the student, it would be advantageous to understand the relationship of local entities and institutional policies to individual student wellness, perceived stress, and mattering. As evidenced in this study, school and community factors seem to have a bearing on student scores, but it was difficult to ascertain how these factors affected individual scores.

## **Implications for Counseling**

### **School Counseling**

Sink, Akos, Turnbull, and Mvududu (2008) stated that comprehensive school counseling programs are results-based systems that outline and direct the primary roles and functions of professional school counselors toward the promotion of students' academic, career, and personal-social developmental competencies. This study implies important implications for school counselors and educators. As evidenced by the significance of student attributes to at-risk status for dropping out of high school, the

need for professional, trained counselors in the educational system is important to affecting the high school dropout problem. Adler (1998b) stated the following:

Education, whether carried on in the home or at school, is an attempt to bring out and direct the personalities of the individual. The science of psychology is thus a necessary basis for proper educational technique; we may look upon all education as a branch of that vast psychological art of living. (p. 89)

School counselors are highly trained in the areas of developmental counseling and psychological aspects of human growth and development. Thus, this study indicates that school counselors are valuable resources to address the psychological and social issues indicated in the wellness model related to at-risk status for dropping out of high school and to employ therapeutic techniques that address these issues.

Specifically, school counselors should help students develop a sense of belonging, feel valued, and develop positive self-worth, which is related to academic motivation and goals. Strategies may include visualizations, art therapy, individual counseling, and group counseling. Students may be encouraged to prepare a personal mission statement and examine how academic success fits into the statement. The student's inner logic should be explored and strengths defined. These strengths can then be used to engage the student in more than just school work but a lifestyle of intellectual growth and personal meaning.

### **The Indivisible Self: An Evidence-Based Model of Wellness**

An additional counseling implication for both school and community mental health counselors is the application of a holistic model of wellness in the counseling

process. Myers, Sweeney, and Witmer (2000) and Sweeney and Myers (2005c) presented a four-phase model for assessing wellness and integrating wellness interventions into counseling. During the first phase, clients are introduced to the model and are asked to reflect on their personal meaning of wellness. The second phase involves assessing wellness levels through scaling techniques or with a wellness assessment instrument such as the 5F-Wel. The third phase is used to develop a personal wellness plan with targeted areas of behaviors that will result in change, and evaluation and follow-up make up the fourth phase. In this Indivisible Self Model of Wellness (Sweeney & Myers, 2009), the self is the central and core of wellness, represented by a single higher-order factor called Total Wellness. As indicated by the variables used in this study, the second-order factors are the creative self, coping self, social self, essential self, and physical self. Two of the second-order factors were significant to at-risk status for dropping out of high school, and implications of each significant factor are discussed.

#### *Creative Self.*

As stated above, there are five components to this factor: thinking, emotions, control, work, and positive humor (Sweeney, 2009). In order to address these components in a high school dropout prevention plan, a treatment plan should build on assets such as striving for excellence, self-efficacy, and interdependence with others. This would involve allowing students to experience natural and logical consequences for their actions beginning at an early age and continuing through adolescence and to understand that there are life rules that govern future lifestyle. Even though students may be lectured over and over again about the consequences of dropping out of high school, they do not have convergent thinking about poor decisions and uncomfortable consequences. There are

two aspects to addressing this issue, which include specific counseling interventions and educational elements. Sweeney (2009) stated that counselors may use self-study situations with adolescent clients. For example, if someone never picks up his or her clothes, he or she wears dirty clothes. This would include the educational element of informing parents of the need to allow consequences to follow the action. In this particular example, the mother would not pick up and wash the clothes. As simple as this may seem, the results can be profound when applied during developmental years before a high school student makes the detrimental decision of dropping out of school.

Counselors should also include interventions that promote a need to learn and to strive for excellence. This would include individual and group counseling with an emphasis on freeing students with “should” and “oughts” in their belief systems and creating plans with new outlooks on how to make the most of the student’s attributes, beliefs, and resources. Sweeney (2009) stated that there is a close association between wellness and Adlerian concepts. Therefore, Individual Psychology would be an excellent theory to employ with adolescent clients. Also, it is interesting to note that the significance of this component of wellness indicates that counselors and educators cannot make others do anything that they do not consider useful to them. Thus, the attributes that protect students from making poor academic decisions can only be understood from the aspect of the student’s private logic (Sweeney, 2009).

#### *Essential Self.*

According to Myers and Sweeney (2005c), the Essential Self is composed of meaning-making processes in relation to life, self, and others. This factor is comprised of four components: spirituality, self-care, gender identity, and cultural identity (Sweeney,

2009). The findings of this study indicated that students who are at-risk for dropping out of high school may have an appreciation for the depth of life and are more sensitive to the wonders of the universe. Individual self expression is an important part of their personal belief system. According to Sweeney (2009), identity development and self care are aspects of the meaning-making processes and influence attitudes of well-being and personal choice.

Strategies for counselors include expressing unconditional positive regard when working with adolescent students. Frankl (1959) would say this was “unconditional faith in unconditional meaning” (p. 156). In addition, counselors should focus on the here and now as it is only in the present moment that change can take place. Helping the student understand that the shadow of the past cannot affect the present moment allows the student the freedom to make new choices. Alfred Adler coined a term called “fictional finalism.” Presbury, Echterling, and McKee (2008) stated that Adler meant that the future is far more important to our current behaviors than our past, and that we live in the light of future expectations. Ask the student to visualize the future and guide the student in gaining a perspective on spiritual values, identity development, and self care. Finally, create attainable goals for school and personal success with clear objectives that are focused on motivation that comes from within the student.

### **Conclusions**

This study serves as a foundation to the literature on the relationship among wellness, perceived stress, mattering, and at-risk status for dropping out of high school. The results suggest that two of the second-order factors of wellness, creative self and essential self, do in fact influence at-risk status for dropping out of high school. In this

study, 35.1% of the variance in at-risk status for dropping out of high school was accounted for by these two components of wellness. This finding has implications for the approach school counselors take with dropout prevention programs and at-risk clients and for educational curriculum development.

There were limitations inherent in this study; however, the results found support for the evidence validating the claim that students at-risk for dropping out of high school possess certain wellness attributes. The components of the creative self included the ability to be mentally active, to have a desire to know and learn, to think both divergently and convergently when problem solving, to be aware of one's feelings, to exercise individual choices, and to use humor to accomplish tasks (Myers & Sweeney, 2005c). In addition, the components of the essential self included a belief in a higher power, purpose in life, compassion for others, moral values, a sense of oneness with the universe, satisfaction with one's gender and cultural identity, and self care and safety habits (Myers & Sweeney, 2005c).

Prior to this study, no research had been conducted that has viewed high school dropout from the nontraditional factors used in this study. The findings conclude that there are complex, wellness components to consider when addressing a holistic prevention program. In addition, the role of the school counselor is important in challenging students to think about greater possibilities for living life more fully through creative goals for the future. Also, teachers and administrators should take another look at what is taught and how it is taught. This study indicates that it is time to restore soulful learning to education that engages the student in all realms. A mechanistic focus of instruction does not promote creativity nor does it promote an enduring love of the learning process. Miller (1996) stated, "Restoring the soul to education is not a new

vision. It is vision articulated by the Greeks and various indigenous people for centuries. It is found in Taoism and in the teachings of Christ and the Buddha” (p. 15).

High school dropout has long been considered a problem of student dysfunction and should now be approached from a perspective that addresses life and academic behaviors affecting the student intellectually, spiritually, and emotionally. The results of this study reinforce the importance of strengthening student engagement, and school counselors should play a leading role in cultivating school-wide interventions that enhance relationships with students and that promote understanding of personalized learning strengths. These findings indicate that the academic learning environment should challenge at-risk students to reach their highest expectations and to embrace their purpose in life and spiritual beliefs.

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APPENDIX A

STUDY INSTRUMENTS THAT ARE NOT COPYRIGHTED

## Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

Never	Almost Never	Sometimes	Fairly Often	Very Often
0	1	2	3	4

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1 In the last month, how often have you been upset because of something that happened unexpectedly?                 | 0 | 1 | 2 | 3 | 4 |
| 2 In the last month, how often have you felt that you were unable to control the important things in your life?     | 0 | 1 | 2 | 3 | 4 |
| 3 In the last month, how often have you felt nervous and “stressed?”  | 0 | 1 | 2 | 3 | 4 |
| 4 In the last month, how often have you felt confident about your ability to handle your personal problems?         | 0 | 1 | 2 | 3 | 4 |
| 5 In the last month, how often have you felt that things were going your way?                                       | 0 | 1 | 2 | 3 | 4 |
| 6 In the last month, how often have you found that you could not cope with all the things that you had to do?       | 0 | 1 | 2 | 3 | 4 |
| 7 In the last month, how often have you been able to control irritations in your life?                              | 0 | 1 | 2 | 3 | 4 |
| 8 In the last month, how often have you felt that you were on top of things?  | 0 | 1 | 2 | 3 | 4 |
| 9 In the last month, how often have you been angered because of things that were outside of your control?           | 0 | 1 | 2 | 3 | 4 |
| 10 In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | 0 | 1 | 2 | 3 | 4 |

## The General Mattering Scale

The following five questions are designed to measure the degree to which you believe that you matter to others. Please circle the appropriate response for what YOU believe.

1. How important do you feel you are to other people?
  - a. Very much
  - b. Somewhat
  - c. A little
  - d. Not at all
  
2. How much do you feel other people pay attention to you?
  - a. Very much
  - b. Somewhat
  - c. A little
  - d. Not at all
  
3. How much do you feel other would miss you if you went away?
  - a. very much
  - b. Somewhat
  - c. A little
  - d. Not at all
  
4. How interested are people generally in what you have to say?
  - a. Very much
  - b. Somewhat
  - c. A little
  - d. Not at all
  
5. How much do people depend on you?
  - a. Very much
  - b. Somewhat
  - c. a little
  - d. Not at all

APPENDIX B  
PARENT LETTER

Parent Letter  
Spring, 2010

Dear Parent,

I will be conducting a research project at our school this fall for my dissertation at Mississippi State University. I am writing to ask your permission for your child to participate in my research. If you give permission for your child to participate in this research, I will also ask your child for his/her assent to participate. This study will help determine whether students who might be at-risk for high school dropout can be predicted by observing measures of mattering, perceived stress, and wellness. Students will be asked to complete five simple surveys: The Student At-Risk Identification Scale – Student Questionnaire, the Five Factor Wellness Inventory – Teenage Version, the General Mattering Scale, the Perceived Stress Scale, and a personal data sheet specifically developed for this study. All instruments are self-report survey questionnaires appropriate for the population in question. It is expected that participants will complete all instruments in 45 minutes. A more detailed description of the study is in the enclosed parental consent form.

Study participants will be recruited from all the students at Florence High School. Student advisor's will discuss the project during their advisory period and will send home this letter with a permission form attached for you to sign and return to school with your child in the enclosed envelope.

The name of your child will not be written anywhere on the research instruments, and there will be no way to link your child's responses to his or her name or other identifying information. Participation is confidential and voluntary. Your child's refusal to participate will involve no penalty or loss of benefits to which they are otherwise entitled, and they may discontinue their participation at any time without penalty or loss of benefits.

I hope that you find this study as beneficial as I do. The results will be used to develop a practical dropout prevention plan consistent with this holistic approach.

Even though I am the researcher in this study, I want to assure you that my role as school counselor will not change. The success of your child academically and socially is vital to me, and whether your child participates in this study or decides not to participate is a personal choice for you and your student. This will not affect our professional relationship or the confidentiality of the data. If you have any questions or concerns, you may reach me at 601-845-3751 or 601-845-2205.

Sincerely,  
Jan C. Lemon, LPC, NCSD, NCC  
Counselor



APPENDIX C  
PARENTAL CONSENT FORM

## Parental Consent Form

**Title of Study:** Early Identification of High School Dropouts: An Investigation of the Relationship Among At-Risk Status, Wellness, Perceived Stress, and Matting

**Study Site:** Florence High School

**Name of Researcher & University Affiliation:** Jan Lemon, Graduate Student at Mississippi State, and Dr. Joshua C. Watson, Associate Professor of Counselor Education, Division of Education, Mississippi State University – Meridian.

**What is the purpose of this research project?** The information gathered from this study will be used to determine whether students who might be at-risk for dropout can be predicted by observing measures of matting, perceived stress, and wellness. The information in this study might encourage students to stay in school and could help support a holistic approach to dropout prevention plans and strategies for our school. In addition, this study will serve as Jan Lemon’s dissertation for her doctoral degree from Mississippi State.

**How will the research be conducted?** With your permission, your child will be asked to fill out a number of survey questionnaires. These brief surveys are designed to measure a number of issues adolescents commonly deal with so that we can see how they related to dropout prevention. The surveys will measure such concepts as dropout risks, overall wellness, matting, and perceived stress. It will take about 45 minutes to complete all of the surveys. Surveys will be administered in the cafeteria by grade level.

**Are there any risks or discomforts associated with my child’s participation?** This study was designed to protect your child from any intentional physical, psychological, or social risks associated with participation in this study. Should however your child experience any uncomfortable feelings as a part of their participation they will be encouraged to discuss these feelings with Sandra Tabor, one of the school counselors. This statement will be reiterated with your child after completion of the instruments.

**Does participation in this research provide any benefits to my child or others?** There will be no direct benefits; however, we hope that your child will learn something about themselves by participating in this study.

**Will this information be kept confidential?** Every reasonable measure will be taken to protect the confidentiality of all study participants. Individual questionnaire responses will not be reported to or shared with parents, child, teachers, or school administrators. In addition, participants will not be asked to include their name on any of the materials used in this study. No student school records will be used to identify individual students. All completed surveys will be securely kept in Jan Lemon’s office for a period of no less than three years. Please note that since these records will be held by a state entity they are therefore subject to disclosure if required by law.

**Who do I contact with research questions?** If you should have any questions about this particular research project, please feel free to contact the project’s principle investigator, Jan Lemon, directly at 601-594-1060. For addition information regarding your rights as a research subject, please feel free to contact the MSU Regulatory Compliance Office at 662-325-3994.

**What if I do not want my child to participate?** Please understand that your child’s participation is voluntary, your refusal to allow him/her to participate will involve no penalty or loss of benefits to which your child is otherwise entitled, and he/she may discontinue their participation at any time without penalty or loss of benefits. You will be given two copies of this form—one to keep and one to return to the researcher in the attached envelope. Please seal the envelope. Please print your child’s name before signing.

\_\_\_\_\_  
Child’s Name (please print)

\_\_\_\_\_  
Signature of Parent or Legal Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Researcher

\_\_\_\_\_  
Date

APPENDIX D  
ADULT STUDENT CONSENT FORM

## Adult Student Consent Form

**Title of Study:** Early Identification of High School Dropouts: An Investigation of the Relationship Among At-Risk Status, Wellness, Perceived Stress, and Mattering

**Study Site:** Florence High School

**Name of Researcher & University Affiliation:** Jan Lemon, Graduate Student at Mississippi State, and Dr. Joshua C. Watson, Associate Professor of Counselor Education, Division of Education, Mississippi State University – Meridian.

**What is the purpose of this research project?** The information gathered from this study will be used to determine whether students who might be at-risk for dropout can be predicted by observing measures of mattering, perceived stress, and wellness. The information in this study might encourage students to stay in school and could help support a holistic approach to dropout prevention plans and strategies for our school. In addition, this study will serve as Jan Lemon's dissertation for her doctoral degree from Mississippi State.

**How will the research be conducted?** With your permission, you will be asked to fill out a number of survey questionnaires. These brief surveys are designed to measure a number of issues adolescents commonly deal with so that we can see how they related to dropout prevention. The surveys will measure such concepts as dropout risks, overall wellness, mattering, and perceived stress. It will take about 45 minutes to complete all of the surveys. Surveys will be administered in the cafeteria during an advisory period by grade level.

**Are there any risks or discomforts associated with my participation?** This study was designed to protect you from any intentional physical, psychological, or social risks associated with participation in this study. If you experience any uncomfortable feelings as a part of your participation you will be encouraged to discuss these feelings with Sandra Tabor, one of the school counselors. This statement will be reiterated after completion of the instruments.

**Does participation in this research provide any benefits to me or others?** There will be no direct benefits; however, we hope that you will learn something about yourself by participating in this study.

**Will this information be kept confidential?** Every reasonable measure will be taken to protect the confidentiality of all study participants. Individual questionnaire responses will not be reported to or shared with parents, child, teachers, or school administrators. In addition, participants will not be asked to include their name on any of the materials used in this study. No student school records will be used to identify individual students. All completed surveys will be securely kept in Jan Lemon's office for a period of no less than three years. Please note that since these records will be held by a state entity they are therefore subject to disclosure if required by law.

**Who do I contact with research questions?** If you should have any questions about this particular research project, please feel free to contact the project's principle investigator, Jan Lemon, directly at 601-594-1060. For addition information regarding your rights as a research subject, please feel free to contact the MSU Regulatory Compliance Office at 662-325-3994.

**What if I do not want to participate?** Please understand that participation is voluntary, your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue your participation at any time without penalty or loss of benefits.

You will be given two copies of this form—one to keep and one to return to the researcher in the attached envelope. Please seal the envelope.

\_\_\_\_\_  
Student's Name (please print)

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Research's Signature

\_\_\_\_\_  
Date

APPENDIX E  
MINOR ASSENT DOCUMENT

## Minor Assent Document

**Title of Study:** Early Identification of High School Dropouts: An Investigation of the Relationship Among At-Risk Status, Wellness, Perceived Stress, and Matting.

**Study Site:** Florence High School

Your parents know that we are going to ask you to participate in this project.

**Name of Researcher & University Affiliation:** Jan Lemon, Graduate Student at Mississippi State, and Dr. Joshua C. Watson, Associate Professor of Counselor Education, Division of Education, Mississippi State University – Meridian.

**What is the purpose of this research project?** The information gathered from this study will be used to determine whether students who might be at-risk for dropout can be predicted by observing measures of matting, perceived stress, and wellness. The information in this study might encourage students to stay in school and could help support a holistic approach to dropout prevention plans and strategies for our school. In addition, this study will serve as Jan Lemon's dissertation for her doctoral degree from Mississippi State.

**How will the research be conducted?** With your permission, you will be asked to fill out a number of survey questionnaires. These brief surveys are designed to measure a number of issues adolescents commonly deal with so that we can see how they related to dropout prevention. The surveys will measure such concepts as dropout risks, overall wellness, matting, and perceived stress. It will take about 45 minutes to complete all of the surveys. Surveys will be administered during the advisory period in the cafeteria by grade level.

**Are there any risks or discomforts associated with my participation?** This study was designed to protect you from any intentional physical, psychological, or social risks associated with participation in this study. Should however you experience any uncomfortable feelings as a part of your participation you will be encouraged to discuss these feelings with Sandra Tabor, one of the school counselors. This statement will be reiterated after completion of the instruments.

**Does participation in this research provide any benefits to me or others?** There will be no direct benefits; however, we hope that you will learn something about yourself by participating in this study.

**Will this information be kept confidential?** Every reasonable measure will be taken to protect the confidentiality of all study participants. Individual questionnaire responses will not be reported to or shared with parents, child, teachers, or school administrators. In addition, participants will not be asked to include their name on any of the materials used in this study. No student school records will be used to identify individual students. All completed surveys will be securely kept in Jan Lemon's office for a period of no less than three years. Please note that since these records will be held by a state entity they are therefore subject to disclosure if required by law.

**Who do I contact with research questions?** If you should have any questions about this particular research project, please feel free to contact the project's principle investigator, Jan Lemon, directly at 601-594-1060. For addition information regarding your rights as a research subject, please feel free to contact the MSU Regulatory Compliance Office at 662-325-3994.

**What if I do not want to participate?** Please understand that participation is voluntary, your refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue your participation at any time without penalty or loss of benefits.

You will be given two copies of this form—one to keep and one to return to the researcher.

\_\_\_\_\_  
Student's Name (please print)

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher's Signature

\_\_\_\_\_  
Date

APPENDIX F  
IRB APPROVAL LETTER



MISSISSIPPI STATE  
UNIVERSITY™

Compliance Division  
Administrative Offices  
Animal Care and Use (IACUC)  
Human Research Protection  
Program (IRB)  
1207 Hwy 182 West  
Starkville, MS 39759  
(662) 325-3496 - fax

Safety Division  
Biosafety (IBC)  
Radiation Safety  
Hazardous Waste  
Chemical & Lab Safety  
Fire & Life Safety  
70 Morgan Avenue  
Mississippi State, MS 39762  
(662) 325-8776 - fax

<http://www.orc.msstate.edu>  
[compliance@research.msstate.edu](mailto:compliance@research.msstate.edu)  
(662) 325-3294

September 3, 2009

Jan Lemon  
128 Beechtree Lane  
Florence, Ms 39073

RE: IRB Study #09-151. Early Identification of High School Dropouts: An Investigation of the Relationship Among At-Risk Status, Wellness, Perceived Stress, and Matterng

Dear Ms. Lemon:

The above referenced project was reviewed and approved via expedited review for a period of 9/3/2009 through 8/15/2010 in accordance with 45 CFR 46.110 #7. Please note the expiration date for approval of this project is 8/15/2010. If additional time is needed to complete the project, you will need to submit a Continuing Review Request form 30 days prior to the date of expiration. Any modifications made to this project must be submitted for approval prior to implementation. Forms for both Continuing Review and Modifications are located on our website at <http://www.orc.msstate.edu>.

Any failure to adhere to the approved protocol could result in suspension or termination of your project. Please note that the IRB reserves the right, at anytime, to observe you and any associated researchers as they conduct the project and audit research records associated with this project.

**Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.orc.msstate.edu/human/aahrpp.php>. The first of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the IRB approved version of the consent form is used in the actual conduct of research. You must use copies of the stamped consent form for obtaining consent from participants.**

Please refer to your docket number (#09-151) when contacting our office regarding this project.

We wish you the very best of luck in your research and look forward to working with you again. If you have questions or concerns, please contact me at [cwilliams@research.msstate.edu](mailto:cwilliams@research.msstate.edu) or call 662-325-5220.

Sincerely,

[For use with electronic submissions]

Christine Williams  
IRB Administrator

cc: Joshua C. Watson

Office of Regulatory Compliance • Post Office Box 6223 • Mississippi State, MS 39762



APPENDIX G

SARIS-SQ PERMISSION LETTER



Authorization for Release of Information from Pace Learning Systems

February 27, 2009

**Jan C. Lemon**  
**Florence High School**

Pace Learning Systems, Inc. grants permission to use the SARIS Student Questionnaire as a research tool for the completion of a dissertation. Any marketing or advertising of the tool is strictly prohibited.

I hereby authorize Jan C. Lemon to use the materials as set forth above.

Signature of authorized **Pace Learning Systems** representative

*Swan P. McKee CEO/President*  
Print Name: Swan P. McKee Date: 2/28/09

Signature of user:

*Jan C. Lemon*  
Print Name: JAN C. LEMON Date: 2/27/09

C:\Documents and Settings\chandler\My Documents\PLS Authorization for Release of DAPS questionnaire.doc

APPENDIX H  
5F-WEL PERMISSION FORM

### Permission to Use the 5F-Wel

The authors of the 5F-Wel will give our permission for your use of the instrument in your dissertation or other research. We will provide information and scoring services, per the following procedures:

1. The Specimen Set for the 5F-Wel includes the Manual, One Instrument, an NCS response sheet if you plan to use paper-and-pencil administration, and a Brief Interpretive Report. The cost for this is \$30. The cost is \$25 if you will accept pdf files and plan electronic scoring (in which case we will not mail any documents or provide bubble sheets). You can copy the 5F-Wel as needed for your population; the cost of scoring is \$1 per person, prepaid. Alternately, you may have your participants complete the inventory on-line. The scoring cost is the same.
2. You will need to specify the nature of your population. We will then assign you a three digit key code which must be written and bubbled in on all of your forms or included in your electronic data set. This code will comprise the first three numbers for each id, so your cases will be numbered, assuming your code is 799, as 799001, 799002, 799003, etc.
3. As a pilot, please complete one 5F-Wel bubble sheet and mail it to me, or complete an SPSS or Excel file in an agreed-upon format for testing. This is to verify that all instructions are followed and all data requested are provided. We will provide the initial file. You will need to assure that all of your participants provide all of the requested data. (If using the on-line version, filling out the form once is also necessary, with a code to be provided based on the nature of the population).
4. When you have collected all of your data, if you are using bubble sheets, review your bubble sheets/data form and edit them as necessary for demographic items and missing data. Then, put them all in the same order (one edge of the page is cut so they can be matched, all right side up and facing forward). *If you are using on-line administration, you must add "age" as a variable.*
5. We will have the data scanned, which takes anywhere from one day to two weeks, depending on when it arrives. We are on a semester system and scanning of midterms and finals takes priority. No scanning services are available during university breaks and holidays. Electronic files may be scored more quickly.
6. The data will be scored using SPSS for windows. Our preference is to e-mail the data file to you. It can also be sent on a disk, but you will have to provide the disk and pay postage. The data file will contain all of the demographic information, item responses, and subscale scores for your participants. It will include raw scores and J-scores for the 5F-Wel factors.
7. We will provide a syntax file to assist you in interpreting the variables in the data set. We will not provide you with the scoring protocol - that is, we will not tell you which items score on which subscales.
8. The manual for the 5F-Wel includes all of the psychometric data you will need for your research proposal.
9. Your data will be included in our data set for development of the 5F-Wel. Individual data will not be used in any form, and we will not conduct research solely on your data set. We expect you to maintain informed consent forms for all participants.
10. Under no circumstances do these permissions include the right to include item and scale information in published documents resulting from your study. The 5F-Wel is proprietary and any such publication of information is a violation of U.S. copyright laws and professional ethical codes of conduct.

Please let me know if there is anything else we can do to assist you in your research.

Jane Myers

APPENDIX I

PERMISSION FOR THE INDIVISIBLE SELF MODEL FIGURE

From: "Jane Myers" <jemyers01@gmail.com>  
Subject: Re: Permission to reprint  
Date: Sun, May 16, 2010 6:39 am  
To: "Jan C. Lemon" <jlemon@rcsd.ms>

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Dear Jan:

Although I am happy to provide permission to reproduce the Indivisible Self Model in your dissertation, with appropriate credits, due to confusion with the Wheel of Wellness, my co-authors and I are not granting permission for reproduction of the Wheel. Of course, the 5F-Wel is copyright and should not be included in your dissertation.

I look forward to reading your results!

Best wishes,

Jane Myers