

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

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Abstract: In this study, the researchers concentrate on the gap in the educational and counseling literature documenting the extent to which certain psychosocial variables may 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. Participants completed 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. Using a regression analysis, the researchers found 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 accounted for 35.1% of the variance in at-risk status for dropping out of high school. Based on these findings, counselors should utilize skills and interventions that help students stay intellectually, spiritually, and emotionally engaged in the learning process.

Introduction

The repercussions of dropping out of high school can be long term and create emotional pain and financial suffering for the student, the student's family, and the community. 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. Amos (2008) stated that currently fewer than three in four students finish high school in four 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 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 research variables that have shown 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 numerous research studies (c.f., Bailey & Stegelin, 2003; Hickman & Garvey, 2006; Smink & Schargel, 2004). In addition, other studies have responded to this problem by assessing categories of these at-risk fac-

tors that are designed to prevent academic failure and improve other school outcome problems such as absenteeism, deviant behavior, and social anxiety (Hickman, Bartholomew, 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. Even though these studies have successfully established at-risk factors, high school dropout continues to be an issue of national concern (America's Promise Alliance, 2009). In order to develop more accurate theoretical models concerning the high school dropout problem, additional factors should be included.

Review of Related Literature

Janosz, Blanc, Boulerice, and Tremblay (2000) have 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) and also 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). As such, researchers have attempted to identify these predictive factors that contribute to a student's decision to drop out of school early.

These factors have focused on father's education, mother's education, mother's work status, and school suspensions (Boon & Cook, 2008); English Language Learners and free and reduced lunch (Zvoch, 2006); suspensions, truancy, and extracurricular activity participation (Randolph, Fraser, & Orthner, 2006).

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's at-risk status, the issue of high school dropout may be viewed 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). In reviewing the research literature, a limited number of studies incorporating adolescent wellness as a study variable were found. These studies included topics such as help-seeking adolescents and wellness levels (Watson & Lemon, 2011); ethnic identity, acculturation, and mattering on wellness (Rayle & Myers, 2004); and nontraditional predictors of dropout such as physical, social, and emotional health (Miller, Gilman, & Martens, 2008; Weatherbee, 2006).

Gall (2008) indicated that social, economic, and academic pressures upon adolescents are creating a climate of fear, anxiety, and depression. She 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). No research studies to date have associated perceived stress with high school dropout; however, a few authors have included this topic in research with an adolescent population. Wadsworth et al. (2008) studied poverty-related stress on adolescent functioning and found 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. In addition, Magaya, Asner-Self, and Schreiber (2005) studied stress and coping, and the authors concluded that adolescents are under considerable stress related to school success, finances, interpersonal relationships, and issues of adolescent development.

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. In studying the aspect of mattering in adolescents, 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 & 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, McWhirter, 2009), greater wellness (Dixon Rayle, 2005), increased academic motivation (Dixon & Tucker, 2008), healthier ethic 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).

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 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 to achieve a greater state of well-being and self-actualization. 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?

Method

This study 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 atrisk status.

Participants

Participants consisted of high school students attending a midsized 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. 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). 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.

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. 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). The raw scale scores are 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, 2011; Dixon Rayle & Myers, 2004). In the 5F-Wel test manual, Myers and Sweeney (2005) 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. In this study, the five second-order factors were used as predictor variables, and the full study alpha coefficients for these variables ranged from .74 to .89.

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 423 ninth- through eleventh-grade students at a predominantly middle-class suburban high school in a southeastern state. Scores on each item were correlated with the total SQ score. The normative 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 et al. (1998) note that a heterogeneous scale of this type tends to underestimate the reliability of this type of measure. The Cronbach's alpha coefficient calculated for this study was .75.

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 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. For this study, a Cronbach's alpha coefficient of .86 was calculated for the GMS.

Perceived Stress Scale. This instrument was used 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 of the samples consisted of college students, and one sample consisted 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 this study sample, the alpha coefficient was .87.

Procedure

Upon receiving IRB approval, the opportunity to participate in this study was presented to the students and informed consent agreements were distributed to the research participants' 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.

Data Analysis

Several preliminary analyses were conducted using version 15.0 of the Statistical Package for the Social Sciences (SPSS, 2006) 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. Second, 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 instruments and subscales were computed for all participants.

Results

Prior to data analysis, missing data were assessed for each entry on all study instruments before creating variables. Two values were missing on the wellness instrument and 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 nonnormal distributions; however, the distributions were not extreme, and the W significance values were all greater than .05 (Leech, Barrett, & Morgan, 2005). 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 chisquare value, X^2 (7, n = 177) = 24.32, p = .001. These two cases were deleted from further analyses. 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 deviation for all scales. Table 1 reports the mean (M), standard deviation (SD), minimum range, and the maximum range for each of the predictor and dependent variables. The scaled scores for the variable perceived stress 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). The scores for the variable mattering 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). 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 1. 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.

The dependent variable SARIS-SQ is an indication of a participant's

Table 1

Descriptive Statistics for Independent and Predictor Variables

Independent Variable	Range Minimum	Range Maximum	М	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
SARIS-SQ	0	18	5.15	3.83

Note. N = 177, M = mean, and SD = standard deviation.

score for being at risk for dropping out of high school, and scores may range from 0 to 27. The mean for this variable is 5.15 (SD=3.837), and the 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.

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. As indicated by Table 2, 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; essential self and coping self, r=.697, p<.01; essential self and coping self, r=.651, p<.01; and 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 r values exceeded .80 (Mertler & Vannatta, 2005).

To evaluate the third research question (To what extent can the

Table 2

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.

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. The standard method was used because the study is exploratory, and there is no substantive knowledge as to which variable many 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). The results 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 3 displays the unstandardized regression coefficients (B), intercept, and standardized regression coefficients (B) 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.

Table 3
Summary of Regression Analysis Variables

Variable	β	SE β	β	t			
Mattering	.125	.099	.099	1.26			
Perceived Stress	.049	.036	.096	1.37			
Creative Stress	.122	.044	.314	2.74*			
Coping Stress	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.

Conclusions and Implications for Counselors and Educators

This study implies important implications for school counselors and educators. As evidenced by the significance of two wellness factors (creative self and essential self), the student that is at risk for high school dropout has a need to incorporate high school completion into his or her personal value system and to bridge individual meaning-making processes in relation to life, goals, self, and others with high school graduation. School counselors should include interventions that promote skills, which develop purpose in life, compassion for others, moral values, and a sense of oneness with the universe. This would include individual and group counseling with an emphasis on

^{*}p < .05

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 academic attributes, personal beliefs, and individual strengths. 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 these components of wellness indicates that counselors and educators cannot make others do anything that they do not consider personally useful. 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).

In addition, 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 a vision articulated by the Greeks and various indigenous people for centuries and is found in Taoism and in the teachings of Christ and the Buddha" (p. 15). Sax and Newton (1997) stated that educational objectives may be cognitive, affective, or psychomotor. The significance of this model points to the fact that affective objectives, which encompass feelings, emotions, and values, should be included in the curriculum. According to Krathwohl, Bloom, and Masia (1964), the highest level of the affective domain is concerned with character and a philosophy of life. 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.

Limitations in the study 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. The use of a convenience sample may possibly limit the generalizability of the results as 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) could 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 researchers would benefit from using a combined sample from various schools with a greater emphasis on parental consent with the less involved students. In addition, 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 researchers were very careful to emphasize to the participants that there were no right or wrong answers and every reasonable measure was taken to protect the confidentiality of all study participants, thereby empowering the participants to be truthful.

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. Continued 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.

References

- America's Promise Alliance. (2009). *Cities in crisis: Closing the graduation gap*. Retrieved from http://www.americapromise.org
- Alliance for Excellent Education. (2007). *Hidden benefits: The impact of high school graduation on household wealth*. Retrieved from http://www.all4ed.org/files/archieve/publications/ hiddenbenefits/pdf
- Amos, J. (2008). *Dropouts, diplomas, and dollars: U. S. high schools and the nation's economy.* Washington, DC: Alliance for Excellent Education.
- Bailey, B., & Stegelin, D. A. (2003). Creating a sense of place: Anchoring at-risk students within K–12 classrooms. *Journal of At-Risk Issues*, 9(2), 17–26.
- Boon, J. J., & Cook, J. (2008). Risk or resilience? What makes a difference? *The Australian Educational Researcher*, *35*(1), 81–102.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 385–396. doi:10.2307/2136404
- Dixon Rayle, A. (2005). Adolescent gender differences in mattering and wellness. *Journal of Adolescence*, 28, 753–763.
- Dixon Rayle, A., & Myers, J. E. (2004). Counseling adolescents toward wellness: The roles of ethnic identity, acculturation, and mattering. *Professional School Counseling*, *8*, 81-90.
- Dixon, A. L., Scheidegger, C., & McWhirter, J. J. (2009). The adolescent mattering experience: Gender variations in perceived mattering, anxiety, and depression. *Journal of Counseling & Development*, 87, 302-318.
- Dixon, A. L., & Tucker, C. (2008). Every student matters: Enhancing strengths-based school counseling through the application of mattering. *Professional School Counseling*, *12*(2), 123-126.
- Elliot, G. C., Kao, S., & Grant, A. (2004). Mattering empirical validation of a social-psychological concept. *Self and Identity, 3*, 339–354. doi:10.1080/13576500444000119
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of college examination. *Journal of Personality and* Social Psychology, 48, 150–170. doi:10.1037/0022-3514.48.1.150
- Gall, M. (2008). The 4S's of adolescent success. *Independent School*, 67(4), 54–65.

- Hickman, G. P., & Garvey, I. (2006). Analyses of academic achievement and school behavior problems as indices of program effectiveness among at-risk adolescents enrolled in a youth-based mentoring program. *Journal of At-Risk Issues, 12*(1), 1–15.
- Hickman, G. P., Bartholomew, M., Mathwig, J., & Heinrick, R. S. (2008). Differential developmental pathways of high school dropouts and graduates. *Journal of Educational Research*, *102*(1), 3–14. doi:10.3200/JOER.102.1.3-14
- Janosz, M., Blanc, M. L., Boulerice, B., & Tremblay, R. E. (2000). Predicating different types of school dropouts: A typological approach with two longitudinal samples. *Journal of Educational Psychology*, 92, 171–1990. doi:10.1016/005-7967(94)90160-0
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: The classification of educational goals: Handbook II: Affective domain.* New York: McKay. SEE REF PG 15
- Leech, N. L., Barrett, K. L., & Morgan, G. A. (2005). SPSS for intermediate statistics. New Jersey: Lawrence Erlbaum Associates, Publishers.
- Magaya, L., Asner-Self, K. K., & Schreiber, J. B. (2005). Stress and coping strategies among Zimbabwean adolescents. *British Journal of Edu*cational Psychology, 75, 661–671. doi:10.1348/000709905X25508
- Marcus, F. M. (1991). *Mattering: Its measurement and theoretical sig-nificance*. Unpublished manuscript.
- Marshall, S. K. (2001). Do I matter? Construct validation of adolescents' perceived mattering to parents and friends. *Journal of Adolescence*, 24, 473–490. doi:10.1006/jado.2001.0384
- McKee, J., Melvin, K. B., Ditoro, V., & McKee, S. P. (1998). SARIS: Student at-risk identification scale. *The Journal of At-Risk Issues*, 4(2), 24–32.
- Mertler, C. A., & Vannatta, R. A. (2005). *Advanced and multivariate statistical methods*. Glendale, CA: Pyrczak Publishing.
- Miller, D. N., Gilman, R., & Martens, M. P. (2008). Wellness promotion in the schools: Enhancing students' mental and physical health. *Psychology in the Schools*, 45(1). doi:10.1002/pits.20274
- Miller, J. P. (1996). *Education and the soul*. Paper presented at American Manufacturing Excellence, Toronto, Canada, November 1996.
- Myers, J. E., & Sweeney, T. J. (2005). *5F-Wel manual*. Greensboro, NC: Mind Garden, Inc.
- Myers, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness, counseling for wellness: A holistic approach to treatment planning. *Journal of Counseling and Development*, 78, 251–266.
- Rayle, A. D., & Myers, J. E. (2004). Counseling adolescents toward wellness: The roles of ethnic identity, acculturating, and mattering. *Professional School Counseling*, 8, 81-90.
- Randolph, K. A., Fraser, M. W., & Orthner, D. K. (2006). A strategy for assessing the impact of time-varying family risk factors on high school dropout. *Journal of Family Issues*, 27(7), 933-950. doi:10.1177/0192513X06287168
- Rosenberg, M., & McCullough, B. C. (1981). Mattering: Inferred significance and mental health. *Research in Community and Mental Health*, *2*, 163–182.
- Rowley, A. A., Roesch, S. C., Bradford, J. J., & Vaughn, A. A. (2005). Developing and validating a stress appraisal measure of minority adolescents. *Journal of Adolescence*, 28, 547-557. doi:10.1016/j. adolescence.2004.10.010

- Sax, G., & Newton, J.W. (1997). *Principles of educational and psychological measurement and evaluation*. Belmont, CA: Cengage Learning.
- Smink, J., & Schargel, F. P. (2004). *Helping students graduate: A strategic approach to dropout prevention*. Larchmont, NY: Eye on Education.
- SPSS Inc. (2006). Statistical Package for the Social Sciences (Version 15.0) [software]. SPSS Inc., Chicago, IL.
- Suh, S., Suh, J., & Houston, I. (2007). Predictors of categorical at-risk high school dropouts. *Journal of Counseling and Development, 85*, 196–203
- Sweeney, T. J. (2009). Adlerian counseling and psychotherapy: A practitioner's approach (5th ed.). New York: Routledge.
- Wadsworth, M. E., Raviv, T., Reinhard, C., Wolff, B., Santiago, C. E., & Einhorn, L. (2008). An indirect effects model of the association between poverty and child functioning: The role of children's poverty-related stress. *Journal of Loss and Trauma*, 13, 156-185.
- Watson, J. C., & Lemon, J. C. (2011). A profile of adolescent wellness: Implications for working with a help-seeking population. *Journal of Humanistic Counseling*. *Education*, and *Development*, 50(1), 70-83.
- Weatherbee, S. (2006). *Preventing high school dropout: Implications of a screening inventory for school reform policy and practice* (Unpublished doctoral dissertation). York University, Toronto.
- Zvoch, K. (2006). Freshman year dropouts: Interactions between student and school characteristics and student dropout status. *Journal of Education for Students Placed at Risk, 11*(1), 97–11.

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