The best years of our lives? Coping with stress predicts school grades, life satisfaction, and feelings about high school ☆

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ABSTRACT

This study examines whether problem-focused, emotion-focused, and avoidant coping strategies predict key outcomes in a sample of 354 high school students. The four outcomes considered are: academic achievement, life satisfaction, positive feelings towards school, and negative feelings towards school. Results demonstrate that coping incrementally predicts all four outcomes above and beyond the effects of the Big Five personality factors, vocabulary, and demographic variables. Incremental prediction is strongest for school feeling variables, where coping predicts 17.4% of the variance in positive feelings, and 15.9% of the variance in negative feelings. All three coping styles are important in predicting different outcomes: problem-focused coping predicts grades, life satisfaction, and positive feelings about school; emotion-focused coping predicts negative feelings only; and avoidant-focused coping predicts both positive and negative feelings about school. Results suggest that coping styles are an important variable for school outcomes, and that the effectiveness of different strategies differs depending on the outcome considered.

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1. Introduction

Transactional models of stress view coping as the behavioral, emotional, cognitive, or physiological processes that follow an individual's appraisal of a situation as stressful (Folkman & Lazarus, 1985; Lazarus, 1999; Lazarus & Folkman, 1984). There are many different taxonomies of coping, but most models encompass Lazarus and Folkman's (1984) initial distinction between problem- and emotion-focused coping with stress (see Folkman & Moskowitz, 2004, for a review of coping models). A further distinction is often made between emotion-focused and avoidant coping (Endler & Parker, 1990). In the current study, we used this broad three-dimensional model of coping (problem-focused, emotion-focused, and avoidant coping). Each of these three strategies aims to reduce stress in different ways: problem-focused coping through resolving the root cause of the stressful situation; emotion-focused coping through a focus on one's emotional responses to the stressor; and avoidant coping through avoiding the stressor as much as possible. Coping strategies have been linked with personality traits, life satisfaction, academic achievement, and a range of well-being

measures (e.g., Carver & Connor-Smith, 2010; Diener, Lucas, & Napa Scollon, 2006; MacCann, Fogarty, Zeidner, & Roberts, 2011).

The current study was designed to tease apart the relative influence of personality and coping styles on a range of academic and emotional outcomes in high school students. Specifically, we examine whether students' typical coping styles incrementally predict their achievement, their satisfaction with life, and their positive and negative feelings towards school over-and-above the effects of the Big Five personality factors and cognitive ability indicators. This research is unique in examining the role of coping across such a broad range of outcomes in a high-school sample, focusing not only on grade point average (GPA), but on a broad range of emotion-related outcomes indicative of student well-being. A further strength of this design is the control for standard personality variables when estimating the influence of coping, as personality is known to relate to coping styles (Connor-Smith & Flachsbart, 2007). In the paragraphs below, we outline how the literature suggests students' coping styles will relate to academic performance and emotional well-being.

2. Coping styles and academic achievement

The utility of a particular coping style depends on the nature of the stressor: problem-focused coping may be best for controllable situations, whereas emotion-focused and avoidant coping appears more adaptive in uncontrollable situations (Lazarus & Folkman, 1984). Attempting to fix an uncontrollable problem is akin to banging one's head against a brick wall, and is more likely to increase stress than

reduce it. However, leaving an aversive but controllable situation unresolved is clearly not an effective course of action, and may be particularly stressful if one focuses on the negative emotional reactions to the aversive situation. Research to date suggests that the goal of attaining high grades in secondary and tertiary education most resembles a controllable situation: Problem-focused coping predicts higher grades whereas avoidant-focused coping predicts lower grades (Cooper, Wood, Orcutt, & Albino, 2003; Endler, Kantor, & Parker, 1994; MacCann et al., 2011; Windle & Windle, 1996). Research on emotion-focused coping is mixed. Some studies report a positive relationship between emotion-focused coping and grades (e.g., Edwards & Trimble, 1992), others report a negative relationship (e.g., MacCann et al., 2011; Whatley, Foreman, & Richard, 1998), while still others report no relationship (e.g., Windle & Windle, 1996). In the current study, we expected to replicate the relationships of problem-focused and avoidant coping with students' high-school grades, while also clarifying the relationship between emotion-focused coping and high-school grades.

3. Personality, coping styles, and academic achievement

The predominant trait model of personality is the five-factor conceptualization (e.g., Costa & McCrae, 1992; Tupes & Christal, 1992). Briefly, these factors are: (a) *Extraversion* (the tendency to be friendly, cheerful, social, and energetic); (b) *Agreeableness* (the tendency to be sympathetic, kind, trusting, and co-operative); (c) *Conscientiousness*, (the tendency to be organized, achievement-focused, disciplined, and industrious); (d) Neuroticism (the tendency to feel negative emotions such as anxiety and depression); and (e) *Openness to Experience* (the tendency to be open to new feelings, thoughts, and values). These broad personality traits are known to predict academic achievement: Poropat's (2009) recent meta-analysis gave meta-analytic correlations of $r = .21$ between Conscientiousness and high school grades, and $r = .12$ between Openness and high school grades. For Conscientiousness, this figure is nearly as high at Poropat's estimate for the relationship between intelligence and grades ($r = .23$), and remained similar in magnitude even after controlling for intelligence.

Coping styles also show consistent relationships with the broad domains of personality. Connor-Smith and Flachsbart's (2007) meta-analysis suggests the following relationships between the five-factor personality model and the three broad coping dimensions. First, problem-focused shows a moderate correlation with Conscientiousness, a small to medium correlation with Extraversion and small correlations with Agreeableness and Neuroticism. Second, emotion-focused coping shows a moderate correlation with Neuroticism, a small to moderate negative relationship with Conscientiousness, and a small negative correlation with Agreeableness. Finally, avoidant coping shows a small to moderate positive relationship to Neuroticism and a small to moderate negative relationship with Conscientiousness. Of note, all three coping styles relate to Conscientiousness, which itself is the most robust personality predictor of academic achievement. Despite the known relationships between personality, coping, and academic achievement, prior research has not systematically controlled for personality or intelligence when examining the relationship between coping styles and achievement. This is a major goal of the current study: To assess whether the relationship between coping and academic achievement remains significant after controlling for personality and intelligence. A strength of the current study is the use of a quasi-representative sample, drawn from five different states across the U.S., and roughly matched to the gender and ethnic composition of the U.S. population.

4. Coping and positive emotional outcomes

Although important, high grades are not the be-all and end-all of high school or college life. In fact, academic success does not always translate into a "good" life, or even a positive school experience. For example, recent research on cultural differences in educational aspirations, beliefs, and practices suggests that an excessive focus on high achievement may lead to negative outcomes such as anxiety and self-doubt (Stankov, 2010). In this article, we additionally consider students' life satisfaction and students' positive and negative reactions towards school as important outcomes in and of themselves. These happiness-related variables are an increasing part of educational policy, which focuses on student well-being, social and emotional learning, and mental health, as well as quantifiable achievement outcomes (see e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). In the current study, we also examine whether coping can incrementally predict these three happiness-related variables above-and-beyond the effects of personality and intelligence.

There is some evidence from studies of high school students that coping relates to outcome variables representing student well-being. Windle and Windle (1996) found that problem-focused coping was negatively related to alcohol use and delinquent activity, whereas emotion-focused coping was positively related to these behaviors. In addition, there is evidence to suggest that avoidance-oriented coping is also associated with higher adolescent alcohol and drug use, more criminal behavior, lower self-esteem, and higher incidents of depressive symptoms (Cooper et al., 2003; Dumont & Provost, 1999; Windle & Windle, 1996). Studies of student populations have also found relationships between coping and various emotional states. Low problem-focused coping relates to negative feelings such as depression and anxiety (Glynshaw, Cohen, & Towbes, 1989; Whatley et al., 1998). Glynshaw et al. also found that anxiety was positively related to a coping strategy called "social entertainment coping", which is most conceptually similar to avoidant coping. Whatley et al. also found that emotion-focused coping predicted depression, anxiety, and state anger. Further still, Diener et al. (2006) argue that the use of effective coping strategies can lead to greater happiness. Specifically, those who use strategies such as problem-focused coping are able to recover from stressful situations more quickly, and thus also return to their baseline level of happiness more quickly, than those who use other less effective forms of coping.

In sum, there is evidence to suggest that the coping styles students use relate in meaningful ways to their emotional experiences. Previous research has not controlled for the influence of major personality traits in this relationship, despite the fact that personality is clearly linked with variables such as life satisfaction and the experience of state emotions (e.g., Hayes & Joseph, 2003; Heaven, 1989; Larsen & Ketelaar, 1991). The present study aims to redress this shortcoming.

5. Aims of the present research

The main aims of this study were to test the following hypotheses:

Hypothesis 1. Students' coping strategies will predict academic and emotional outcomes and in particular, GPA, life satisfaction, and both positive and negative feelings towards school.

Hypothesis 2. The effect of coping on academic and affect-related outcomes will be incremental beyond the effects of cognitive ability, personality, and demographic variables.

6. Method

6.1. Participants

The study consisted of 354 high school students (52.5% female) in grades 9 (74.3%) and 10 (25.7%) from five different states of the U.S. The sample comprised the following self-reported ethnicities: White/Other (67.5%), Hispanic (13.0%), and African American (19.5%), which is reasonably close to the general U.S. ethnic composition (67.4%

White Non-Hispanic, 14.5% Hispanic, and 12.1% African American; see Grieco & Cassidy, 2001).

6.2. Measures

6.2.1. Coping with School Situations Questionnaire (CWSS)
Test takers rated how often they had engaged in several behaviors indicative of problem-focused, emotion-focused, and avoidant coping across three situations: (a) after-school activities (e.g., "I make the extra effort to get all of my activities completed," *problem-focused coping*), (b) homework (e.g., "I blame myself for having put off my homework," *emotion-focused coping*), and (c) preparing for and taking tests (e.g., "I go out with my friends," *avoidant coping*). Items were rated on a 4-point scale: (1) Never or Rarely, (2) Sometimes, (3) Often, (4) Usually or Always. Twelve items referred to homework, 9 items referred to classwork and tests, and 12 items referred to after school activities (see MacCann et al., 2011).

6.2.2. Vocabulary
The vocabulary test consisted of 20 three-part items taken from the Vocabulary Levels Test (Schmitt, Schmitt, & Clapham, 2001). Each item consisted of three words that had to be matched to one of six synonyms, such that scores could range from 0 to 60.

6.2.3. Personality
The Big Five factors of personality were measured using 120 items selected from the International Personality Item Pool (IPIP; Goldberg et al., 2006). Items represented Openness (23 items; e.g., "I can quickly think up new ideas."); Conscientiousness (24 items; e.g., "I do just enough work to get by" [Reverse-keyed]); Extraversion (23 items; e.g., "I make friends easily"); Agreeableness (25 items; e.g., "I am polite to strangers"); and Neuroticism (25 items; e.g., "I often feel sad"). Participants rated how accurately each item described them on a 5-point scale from (1) "Very inaccurate" to (5) "Very accurate".

6.2.4. Average grade last semester
Each student reported their grades from the previous semester in mathematics, English, science and social studies. Grades were converted into a 13-point scale from 0 (F or Fail) to 12 (A+). For each student, a parent also reported their grade in these subjects in the previous semester. Cases were excluded from the sample (listwise) if parent- versus self-reported grades differed by more than 2 letter grades. The average self-reported grade across all four subjects was used to represent academic achievement (i.e., average grade ranged from 0 for failing all subjects to 12 for obtaining an A+ on all subjects).

6.2.5. Students' Life Satisfaction Scale
Students reported their global life satisfaction on seven items, which were rated on a 6-point scale: (1) Strongly Disagree, (2) Moderately Disagree, (3) Mildly Disagree, (4) Mildly Agree, (5) Moderately Agree, and (6) Strongly Agree. Sample items include: "*My life is going well*," "*I have what I want in life*" (see Huebner, 1991).

6.2.6. Feelings about school life
Participants rated how often they feel several positive and negative emotions during three different aspects of school life: After-school activities, homework, and classwork and tests (e.g., "I have felt PROUD about being involved in so many after-school activities"). Items were rated on the following 4-point scale: (1) "Never or Rarely"; (2) "Sometimes"; (3) "Often"; (4) "Always". There were 26 items to index positive emotions and 18 items to index negative emotions (see Lipnevich, MacCann, Bertling, & Roberts, 2009).

6.3. Procedure
Students were recruited from five sites across the United States (Atlanta, GA; Chicago, IL; Denver, CO; Fort Lee, NJ; and Los Angeles, CA). Each student was tested at a local site and was compensated for his or her participation. Students were taken to a testing room to undertake a proctored computerized test battery that took between 1.5 and 2 h to complete. Students were prompted to take a break mid-way through the battery. For each student, a parent also came to the testing site, and completed a brief paper-and-pencil questionnaire, including a report of their child's grades from the previous semester. All tests and protocols were approved by the Educational Testing Service human ethics and fairness review committee.

7. Results

7.1. Reliability and descriptive statistics

Table 1 shows the reliability and descriptive statistics for all variables. Internal consistency was acceptable for all variables, ranging from .80 (for Agreeableness) to .93 (for positive feelings towards high school). There were significant sex differences for both problem-focused and avoidant coping. Girls reported significantly greater problem-focused coping and significantly less avoidant coping than boys, in line with findings for adults (Matud, 2004; Ptacek, Smith, & Dodge, 1994; Tamres, Janicki, & Helgeson, 2002). Girls also reported significantly higher scores on Extraversion, Agreeableness, and Neuroticism, higher grades, and lower negative feelings towards school. Gender differences in personality were also in line with previous research (e.g., Costa, Terriacciano, & McCrae, 2001).

7.2. Correlations among variables

Table 2 shows the zero-order correlations among variables in this study. In the passages below we summarize how this data relates to our main hypotheses.

7.2.1. Coping strategies
Emotion-focused and avoidant coping share a small to moderate positive correlation with each other. There are no other significant relationships between the coping variables. Problem-focused coping was significantly correlated with all five personality domains, with the strongest correlation being a substantial relationship with Conscientiousness. Both emotion-focused and avoidant coping showed significant relationships with Openness, Agreeableness, and Neuroticism. The size of these personality–coping relationships was small, except for the Neuroticism/emotion-focused coping relationship, which was of moderate effect size. Both avoidant and emotion-focused coping were significantly related to vocabulary, and all three coping styles were significantly related to students' grades (with the weakest relationship for emotion-focused coping). Problem-focused coping was significantly related to life satisfaction and positive feelings towards school. Emotion-focused coping was significantly related to lower life satisfaction and negative feelings towards school. Finally, avoidant coping was significantly related to both greater positive feelings towards school *and* greater negative feelings towards school.

7.2.2. Personality
Intercorrelations among the five personality traits were of small to moderate magnitude, ranging from .07 (between Extraversion and Conscientiousness) to −.48 (between Neuroticism and Agreeableness). Openness, Extraversion, Agreeableness, and Neuroticism were significantly related to vocabulary scores, with the strongest relationship for Openness. All personality domains but Extraversion significantly predicted grades and negative feelings towards school. Openness and

Table 1
Reliability, descriptive statistics, and sex differences for all variables.

Measure	Alpha	# items	All (N = 354)		Male (n = 168)		Female (n = 186)		Sex d
			Mean	SD	Mean	SD	Mean	SD	
Problem-focused	.89	9	25.21	6.08	23.68	5.95	26.60	5.88	−0.49**
Emotion-focused	.81	12	22.01	5.75	21.73	5.99	22.27	5.52	−0.10
Avoidant	.88	11	20.63	6.79	21.44	6.53	19.89	6.96	0.23*
Vocabulary	.88	20	46.92	9.10	47.26	9.06	46.61	9.16	0.07
Openness	.82	23	81.61	11.59	81.26	11.27	81.93	11.89	−0.06
Conscientiousness	.86	24	78.28	12.69	77.08	12.21	79.37	13.05	−0.18
Extraversion	.85	23	90.21	11.13	87.39	11.29	92.77	10.35	−0.50**
Agreeableness	.80	25	88.53	10.75	86.64	10.62	90.23	10.61	−0.34**
Neuroticism	.83	25	60.98	11.92	59.32	11.56	62.49	12.07	−0.27**
Mean GPA	–		8.65	1.82	8.23	1.96	9.02	1.61	−0.44**
Life satisfaction	.83	7	32.88	5.94	32.50	5.81	33.23	6.04	−0.12
Positive feelings	.93	26	49.61	10.45	49.52	10.78	49.69	10.45	−0.02
Negative feelings	.92	18	52.26	13.29	50.36	12.64	53.97	13.66	0.27**

Note. Sex differences were calculated using Hedge's g, where negative values indicate higher scores for females; statistical significance refers to a t-test.
* $p < .05$.
** $p < .01$.

Conscientiousness were the strongest predictors of grades, whereas Neuroticism was the strongest predictor of negative feelings. All personality domains significantly predicted both life satisfaction and positive feelings towards school. Low Neuroticism was the strongest predictor of life satisfaction, whereas Conscientiousness was the strongest predictor of positive feelings towards school.

7.3. Incremental prediction of academic outcomes by the coping variables

Hierarchical linear regressions were conducted to predict the four outcome variables: (a) grades; (b) life satisfaction; (c) positive feelings towards school; and (d) negative feelings towards school. At step 1, control variables were entered (sex, dummy-coded ethnicity, and parent age). At step 2, vocabulary scores were entered. At step 3, the five personality domains were entered. At step 4, the three coping variables were entered. For these analyses, ethnicity was dummy coded into White, African American, and Hispanic, with White as the reference group. Parent age at time of reporting was coded as a dichotomous variable (under 40 versus 40 or over). Table 3 reports the variance explained at each step and the standardized regression coefficients at step 4.

7.3.1. Grades

Control variables explained 14.0% of the variation in GPA, with vocabulary explaining an additional 11.6%. Personality significantly incremented this prediction ($\Delta R^2 = .081$), with significant beta-weights for

Openness and Extraversion only. Note that the standardized beta-weight for Conscientiousness was significant at step 3 ($\beta = .14$, $p = .01$), before the coping variables were entered into the equation, but was not significant at step 4. Coping incrementally predicted students' grades above and beyond control variables, vocabulary, and personality ($\Delta R^2 = .019$). Only the beta-weight for problem-focused coping was significant, indicating that problem-focused coping predicts grades.

7.3.2. Life satisfaction

Neither control variables nor vocabulary explained a significant amount of variation in life satisfaction. Personality explained an additional 21.5% of the variation in life satisfaction (after control and ability variables). Of the personality variables, only Neuroticism showed a significant relationship, with higher levels of Neuroticism predicting lower levels of life satisfaction. Coping explained an additional 3.0% of the variation in life satisfaction, which was significant. The regression coefficient was significant for problem-focused coping but not for emotion-focused or avoidant coping.

7.3.3. Positive feelings towards school

Control variables explained little variation in positive feelings towards school, and vocabulary did not significantly increment this prediction. However, personality explained a relatively large amount of variance in positive feelings towards school (30.9%), with positive feelings significantly predicted by high Openness and low Neuroticism. Coping variables showed a substantial and significant incremental

Table 2
Correlations among all variables.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Problem												
2. Emotion	.06											
3. Avoid	.05	.39**										
4. Vocabulary	.05	−.21**	−.44**									
5. Openness	.43**	−.17**	−.16**	.44**								
6. Conscientiousness	.63**	−.10	−.03	.04	.44**							
7. Extraversion	.30**	−.08	.03	.16**	.35**	.07						
8. Agreeableness	.39**	−.27**	−.19**	.24**	.33**	.37**	.27**					
9. Neuroticism	−.28**	.40**	.13*	−.20**	−.38**	−.34**	−.28**	−.48**				
10. Mean grade	.32**	−.12*	−.27**	.41**	.36**	.28**	.08	.23**	−.18**			
11. SWLS	.37**	−.14**	.00	.03	.20**	.30**	.23**	.28**	−.41**	.21**		
12. Positive feelings	.56**	.05	.36**	−.13*	.34**	.44**	.26**	.23**	−.31**	.05	.32**	
13. Negative feelings	−.07	.59**	.34**	−.26**	−.30**	−.21**	−.02	−.30**	.54**	−.25**	−.21**	−.04

* $p < .05$.
** $p < .01$.

Table 3
Hierarchical regressions predicting GPA, life satisfaction, and feelings toward school from control variables, ability variables, personality and coping styles (standardized beta-weights are from step 4).

	GPA		Life satisfaction		Positive feelings		Negative feelings	
	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.140**		.019		.016		.034*	
Control variables[a]								
Step 2	.116**		.000		.009		.057**	
Vocabulary		.254**		−.076		−.118*		−.038
Step 3	.081**		.215**		.309**		.260**	
Openness		.156**		−.051		.161**		−.125*
Conscientiousness		−.052		.057		.096		.004
Extraversion		−.140**		.078		.062		.133**
Agreeableness		−.040		−.003		−.004		−.003
Neuroticism		−.055		−.316**		−.140**		.343**
Step 4	.019*		.030**		.174**		.159**	
Problem-focused		.187**		.247**		.390**		−.008
Emotion-focused		−.019		−.035		−.019		.394**
Avoidant		−.080		−.029		.336**		.123**
Total R^2	.357**		.264**		.508**		.492**	

 * $p<.05$.
 ** $p<.01$.
 [a] Control variables are sex, dummy-coded ethnicity, and age range of the reporting parent (over or under 40 at the time of reporting).

prediction, explaining an additional 17.4% of the variance. In particular, higher problem-focused coping and higher avoidant coping predicted greater levels of positive feelings towards high school.

7.3.4. Negative feelings towards school

Control variables significantly predicted negative feelings towards high school, explaining 3.4% of the variance. Vocabulary scores proved incremental, explaining an additional 5.7% of the variance in negative feelings towards high school. Lower vocabulary scores indicated greater negative feelings, but this relationship was no longer significant after coping variables were entered, with the standardized regression coefficient dropping from −.258 ($p<.01$) at step 2 to −.133 ($p<.05$) at step 3 to −.036 (ns) at step 4. Personality explained an additional 26.0% of the variation in negative feelings towards school. High Neuroticism, high Extraversion, and low Openness significantly predicted negative feelings towards high school, with the strongest relationship for Neuroticism. Finally, coping variables explained an additional 15.9% of the variation in negative feelings towards school. In this instance, emotion-focused and avoidant coping predicted negative feelings towards high school.

8. Discussion

Both of the study's hypotheses were confirmed: At least two of the three coping styles significantly predicted each of the four outcomes, and coping significantly predicted all four outcomes even after controlling for covariates. However, although coping with stress showed significant incremental prediction of all four outcome variables, the effect sizes were strikingly different for the four different outcomes. Coping styles incrementally predicted about one sixth of the variation in positive and negative feelings towards school, but less than one thirtieth of the variance in either school grades or life satisfaction. The clearest finding seems to be that coping is much more important for emotional outcomes than for school achievement or for life satisfaction. This finding may have important applications for educators. There are several school-based interventions aimed at teaching students appropriate coping skills (e.g., Ruus et al., 2007; Steinhardt & Dolbier, 2008). The most sensitive measure of these programs' effectiveness might be the change in students' feelings towards school rather than changes in grade point average, or in broad-based well-being, such as life satisfaction.

8.1. Personality and coping

Students' coping styles showed clear overlap with the five factor personality traits, and these were generally in line with previous findings (e.g., Connor-Smith & Flachsbart, 2007). The strongest personality correlate of problem-focused coping was Conscientiousness, and the strongest personality correlate of emotion-focused coping was Neuroticism. Avoidant coping, by contrast, showed no meaningful relationship with any of the Big Five personality traits. Although there was substantial correlation between personality and coping, this paper demonstrated that coping was not redundant with personality through the incremental prediction of important outcomes linked to affect.

The independence of coping strategies from broad personality domains is an important point for researchers who are interested in investigating coping styles (and related interventions) in educational psychology. The use of noncognitive constructs for educational research and applications is increasing, as is the increase in the number of suggested noncognitive constructs that may be important for student outcomes (see e.g., Lipnevich, MacCann, & Roberts, in press). Many of these "new" noncognitive constructs taken from non-personality research areas are strongly related to existing personality domains or facets, and show little additional prediction of criteria (e.g., MacCann & Roberts, 2010). Re-inventing the wheel is a major concern for research scientists in these areas, as new concepts, or concepts from different fields, are often empirically similar to existing personality traits (see e.g., Block, 1995; Kelley, 1927). It is important to show that these new traits have something to offer above and beyond personality, and this paper has demonstrated that this appears the case for coping with stress.

8.2. The effectiveness of problem-focused, emotion-focused, and avoidant coping

Although Lazarus and Folkman (1984) originally argued that each coping strategy could be effective for different kinds of stressors, other key researchers have suggested that problem-focused coping is generally the most effective for most situations (Zeidner & Saklofske, 1996). Much of the empirical literature has shown that problem-focused coping results in reduced stress and a range of positive outcomes, whereas avoidant coping results in elevated stress and a range of negative outcomes (e.g., Aldwin & Revenson, 1987; Aspinwall & Taylor, 1992; Glynshaw et al., 1989; O'Donnel, Badrick,

Kumari, & Steptoe, 2008; Rohde, Lewinsohn, Tilson, & Seeley, 1990). With this empirical backdrop, it would be tempting to generalize the differential effectiveness of the three coping styles across all situations. However, the current research demonstrates that avoidant coping is actually an important *positive* predictor of positive feelings towards school: Students who use greater avoidant coping tend to feel better about their school experiences. Thus, avoidant coping is not necessarily an ineffective coping strategy for all situations or over all outcomes. Research from Betancourt, MacCann, and Roberts (submitted for publication) suggests that there are some uncontrollable aspects of school life that might be effectively coped with through avoidance. In Betancourt et al., the relationship among well-being and avoidant coping was positive for students who were bullied, but negative for students who were not, demonstrating that avoidant coping may be effective in dealing with an uncontrollable, aversive situation. The current study adds additional evidence to the proposition that avoidant coping can be effective under certain circumstances.

8.3. Limitations and future directions

Although this study found that coping strategies shared clear links with student outcomes above and beyond personality factors, the causal direction of the relationships between coping variables and outcomes is not clear. Although there was a strong relationship between feelings towards school and coping styles, it is quite possible that the causal direction could be either way (or even more plausibly, could be reciprocal in nature). Students' feelings about high school could easily influence the way that they choose to cope. For example, feelings of confidence may be associated with increased control, and therefore result in problem-focused coping, whereas feelings of anxiety may be associated with decreased personal control, and therefore result in avoidant coping. Clearly there is a need for longitudinal studies of coping over the school years that may allow stronger causal inferences to be made about the relationship between coping strategies and a range of academic outcomes.

9. Conclusion

The way that students cope with the school environment is clearly related to valued academic and emotional outcomes at school, and these relationships are independent of personality. Results suggest that coping is an important variable for educators and policymakers to consider, especially in terms of students' feelings about school. The way that students cope shows a strong relationship with their emotional reactions to their school experience. Quite apart from the innate value of student happiness, such results are suggestive for student attrition, truancy, and educational aspirations.

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