

An Alternative Path for Academic Success: Evaluating the Role of Mental Skills in an English Composition Course

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Higher levels of mental skill use and knowledge have been consistently associated with enhanced performances in athletic settings (e.g., Greenleaf, Gould & Dieffenbach, 2001; Hatzigeorgiadis, Zourbanos, Galanis, & Theodorakis, 2011; Weinberg, 2008). More specifically, exceptional athletic performances have been linked to the practice and application of mental skills such as goal-setting, imagery, self-talk, emotion control, activation, relaxation, automaticity, and positive thinking (Thomas, Murphy, & Hardy, 1999). Mental skills have also been shown to enhance psychological resilience, stress hardiness, and performance among members of the U.S. military (Adler et al., 2015).

The application of mental fitness-related training in academic settings has undergone only preliminary exploration. For example, the Penn Resiliency Program has been developed and tested for use with adolescents in public schools. Randomized studies on the Penn Resiliency Program demonstrate that this intervention reduces the risk of developing depression (Brunwasser, Gillham, & Kim, 2009); however the impact of this intervention on academic performance is not known. In a recent small-scale intervention using mental skills as a training platform to enhance psychological resilience and stress hardiness of first-generation college students (Jordan,

Hammermeister, Briggs, Galm, & Pickering, 2012), researchers found an advantage over time for first-generation college students in the treatment condition on a variety of mental skill, resilience, and academic challenge-related variables relative to peers in a control group. While the results of this particular study suggest mental skills may have some utility in improving resilience and the academic experience of first-generation college students, the small sample size ($N = 28$) and a quasi-experimental design leave room for future research. Thus, the purpose of our study was to further examine the relationship among mental skill knowledge and use on college students' academic habits and experiences.

METHODS

Participants

Participants included: 322 college students (48% males; 52% females) enrolled in a freshman-level English composition course at a midsize public university in the Pacific Northwest. Ages ranged from 16 years to 28 years (mean age = 18.88 years). Ethnicity demographics consisted of 64.0% White, 6.6% African American, 14.3% Latino, 5.2% Asian, and 9.9% other. Year in school included 83.3% freshmen, 12.3% sophomores, 2.5% juniors, and 1.9% seniors.

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Instrumentation

Study Skills. A revised version of the Study Process Questionnaire (R-SPQ-2F; Biggs, Kember, & Leung, 2001) was used to assess students' qualitative approach to studying. It is designed to give the individual a score for two main factors: deep and surface approaches to studying. The R-SPQ-2F is a 20-item instrument and uses a 5-point Likert-type scale.

Academic Challenges. A modified version of the academic challenge questionnaire developed by Bui (2002) was used to assess students' ability to cope with the typical adversities faced by college students. Items included fear of failing at the university, worrying about financial aid, feeling prepared for college, feeling accepted at the university, and being satisfied with the overall college experience. For each challenge, participants indicated their assessment of how true the experience is for them on a 7-point scale ranging from 1 (*not at all true*) to 7 (*completely true*).

Academic Self-Efficacy. To measure self-efficacy, this study used the self-efficacy items developed by Grant and Franklin (2007). The measurement consists of four items which are rated on a 10-point Likert-type scale from 1 (*no confidence*) to 10 (*fully confident*).

Mental Skills. Developed by Thomas et al. (1999) and refined by Hardy, Roberts,

Thomas, & Murphy (2010), the Test of Performance Strategies-2 (TOPS2) measures psychological skills and strategies utilized by athletes during practice and competition events. We utilized the revised TOPS2 due to its strong psychometric properties. The verbiage for this measure was slightly adapted to make items more relevant for use with first-generation college students. This study used 5 of the 8 practice subscales from the TOPS2 (self-talk, emotional control, goal setting, activation, and attentional control) and 2 of the competition subscales (negative thinking and imagery).

Additionally, due to the sport-specific verbiage of the relaxation scales from the TOPS2 not being relevant to an academic setting, we retained the relaxation (competition) scale from the original Test of Performance Strategies (Thomas et al., 1999) instrument. Each subscale is comprised of four items which are rated on a 5-point Likert-type scale from 1 (*never*) to 5 (*always*), indicating the frequency of mental strategy usage (e.g., "I set very specific goals" and "I motivate myself to train through positive self-talk").

Psychological Resilience. Originally developed by Connor and Davidson (2003), the Connor-Davidson Resilience Scale (CD-RISC) measures the psychological resilience of an individual and consists of 25 items (e.g., "I like challenges") using a 5-point Likert-

TABLE 1.
Overall Sample Means, Standard Deviations and Alphas

Variable	<i>M</i>	<i>SD</i>	Cronbach's α
Study Deep Approach (R-SPQ2F)	2.78	0.638	.81
Test of Performance Strategies (TOPS2)	3.35	0.449	.89
Academic Self-Efficacy	7.96	1.530	.83
Resilience (CD-RISC)	3.75	0.708	.90
Self-Esteem (RSES)	3.14	0.499	.87

TABLE 2.
ANOVA Results Comparing High Mental Skill and Low Mental Skill Groups on
Academic Success Variables

Variable	High Mental Skill (<i>n</i> = 159)		Low Mental Skill (<i>n</i> = 163)		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Study Deep Approach	3.017	0.616	2.510	0.546	60.824	.000
Fear of Failure	4.711	2.109	5.302	1.967	6.681	.010
Preparedness for College	5.308	1.373	4.359	1.370	38.114	.000
College Satisfaction	6.188	1.177	5.357	1.721	25.249	.000
Academic Self-Efficacy	8.474	1.306	7.388	1.565	94.216	.000
Resilience	4.073	0.589	3.419	0.673	33.318	.000
Self-Esteem	3.345	0.398	2.950	0.517	57.613	.000

Note. Significant at the $p < .05$ level.

type scale ranging from 0 (*not true at all*) to 4 (*true nearly all of the time*). We utilized a single factor, 10-item revised version of the CD-RISC validated by Campbell-Sills and Stein (2007).

Self-Esteem. The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was designed as a unidimensional self-report measure of feelings of global self-esteem in adolescents. The RSES consists of 10 items— 5 positive statements and 5 negative statements about the self. Example statements include “On the whole, I am satisfied with myself,” “At times I think I am no good at all,” and “I feel that I have a number of good qualities.” A 4-point response format is used: *strongly disagree*, *disagree*, *agree*, and *strongly agree*.

DESIGN

A cross-sectional design was utilized. The TOPS2 was operationalized as our indicator of mental skill knowledge and use. Participants were then categorized into high mental skill ($n = 159$) and low mental skill ($n = 163$) groups based on the distribution of scores from

the TOPS2. A one-way ANOVA was then used to compare these high and low groups on our academic success variables of interest.

RESULTS

One-way ANOVA analyses were conducted to compare the differences in study processes, psychological resilience, self-esteem and ability to deal with academic challenges between the mental skills groups. Overall sample means, standard deviations and alphas are presented in Table 1. Results show that virtually all of the academic success-related variables of interest differed between the two mental skills groups (see Table 2).

DISCUSSION

Group Differences on Resilience

Participants in the high mental skill group scored significantly better on the CD-RISC than the low mental skill peers (see Table 2). These findings, while unique for a population of English 101 students, is not surprising as previous research has shown a link between

mental skills and all of the TOPS2-related constructs in both military settings (e.g., Adler et al., 2015), sport (Galli & Vealey, 2008), and educational settings (Jordan et al., 2012). This finding also highlights the likely relationship between individual mental skills such as focus, goal setting, mental imagery, self-confidence, and relaxation with the development of resilience. In other words, participants in this study who displayed high levels of knowledge and use of the TOPS2 variables may be providing themselves with a powerful resilience protective factor which may result in an inoculating effect against the multiple stresses associated with college life.

Group Differences on Self-Efficacy and Self-Esteem

The high mental skill group scored higher on the Grant and Franklin academic self-efficacy instrument and the RSES (see Table 2) than their peers in the low mental skill group. This finding indicates a more positive ability to self-reference among participants in the high mental skill group as opposed to those in the low mental skill group. As this study was correlational in nature, the mechanisms driving these findings still remain unknown; however, the established link between self-confidence, self-efficacy, and self-esteem may provide some clues. Self-efficacy (Bandura, 1997) may be viewed as a situational-specific form of self-confidence and efficacy expectations could influence self-perceptions (e.g., self-esteem), especially when the success/failure is heavily tied in with self-worth. Thus, participants who possess a stronger set of mental skills also provide themselves with a means by which to self-reference in a stronger and more powerful fashion, which in turn may influence their feelings of self-worth.

Group Differences on Academic Challenges

Participants in the high mental skill group

scored significantly better on the academic challenge items of preparedness for college, satisfaction with college, and thoughts of failing in school than did their peers in the low mental skill group. This finding reflects a recurring theme in the sport psychology literature whereby more mentally skilled athletes also report better ability to cope with a variety of physical and mental challenges (e.g., Greenleaf et al., 2001). Again, the mechanism behind this finding cannot be determined due to the design of this study; however, it appears that individuals in this high mental skill group are better equipped psychologically to persevere in college, and indeed, may look at college life through a slightly different lens (i.e., as less threatening) than participants in the low mental skill group.

Group Differences on Study Skills

Results of this study show the high mental skill group to have better study habits than participants in the low mental skill group (see Table 2). This finding also is congruent with a wide body of sport psychology literature which shows the most mentally skilled performers are also the most successful—primarily due to their tendency to prepare, perform, and persevere in superior ways (e.g., Greenleaf et al., 2001). This finding is also congruent with the findings of Jordan and colleagues (2012) which showed more mentally skilled first-generation college students outperformed their less skilled peers on a variety of variables related to academic performance, which included both study habits and GPA.

Limitations and Implications for Future Research

The primary limitation of this study was its cross-sectional design which restricts our ability to make cause-and-effect inferences. Future research involving experimental designs aimed at investigating causal relationships between

mental skills, psychological resilience, study habits, and ultimately, academic achievement in a higher education setting are in order. This study's sample was primarily freshmen at a regional university in the Pacific Northwest and therefore may not be generalizable to all other college populations. Future research examining the role of psychological skills across a range of higher education institutions

as well as across different demographic groups would surely provide useful information to help target future research.

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