Learning and Individual Differences 23 (2013) 151–157

Contents lists available at SciVerse ScienceDirect

Learning and Individual Differences

journal homepage: www.elsevier.com/locate/lindif

Looking beyond grades: Comparing self-esteem and perceived academic control as predictors of first-year college students' well-being ☆

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ARTICLE INFO

Article history:
Received 8 August 2011
Received in revised form 9 July 2012
Accepted 10 July 2012

Keywords:
Self-esteem
Perceived control
Emotion
Stress
Health
Well-being

ABSTRACT

Previous research has found perceived academic control (PAC) to be a better predictor of first-year college students' grades than self-esteem; however, it is uncertain which construct is more important for students' well-being. The current study compared PAC and self-esteem on first-year college students' emotions, perceived stress, and self-reported health using structural equation modeling. Regarding emotions, students' PAC negatively predicted boredom and anxiety, and had a small positive predictive effect on enjoyment; in contrast, students' self-esteem had a relatively small negative relationship with anxiety. Regarding stress and health, self-esteem negatively predicted students' perceived stress and positively predicted students' self-reported psychological and physical health; comparatively, PAC had a negligible relationship with these outcomes. Discussion focuses on the unique relationships between self-esteem and perceived academic control with college students' well-being, and the importance of examining predictors of these variables in addition to grades.

1. Introduction

Grades are often seen as the gold standard measure of success in education, and determining the factors that affect academic achievement has been a common endeavor by educational researchers. Studies of two prominent psychosocial predictors have shown that self-esteem is a relatively weak and unreliable predictor of college students' academic achievement (Baumeister, Campbell, Kruegger, & Vohs, 2003; Crocker & Luhtanen, 2003), whereas college students with high, relative to low, perceived academic control (PAC) over academic outcomes are more successful academically (Perry, Hladkyj, Pekrun, Clifton, & Chipperfield, 2005; Wise, Roos, Plake, & Nebelsick-Gullet, 1994). More importantly, comparative studies have found PAC to be a better predictor of first-year college students' academic achievement than self-esteem (Ross & Broh, 2000; Stupnisky et al., 2007).

Although a focus on academic achievement is important, it has led some educators and researchers to overlook students' well-being. Positive feelings, low stress, and good health is fundamentally beneficial to students; furthermore, the well-being of college students is critical to their academic success as students who exhibit more positive emotional patterns, less stress, and better health typically receive higher grades and are less likely to drop out of college (Andrews & Wilding, 2004; Daugherty & Lane, 1999; DeBerard, Speilmans, & Julka, 2004; Hysenbegasi, Hass, & Rowland, 2005; Pekrun, Goetz, Titz, & Perry, 2002). Comparisons of established psychosocial constructs, such as self-esteem and PAC, are uncommon but useful to identify the most important factors playing a role in student well-being and performance.

Self-esteem is commonly regarded as the positive or negative attitude a person has towards the concept of the self (Rosenberg, 1965) and is one of the most researched constructs in psychology (Judge, Erez, Bono, & Thoresen, 2002). Conceptually, Baumeister et al. (2003) asserted that individuals with high, relative to low, self-esteem are perceived to have greater aspirations, are more persistent in the face of failure, and are less likely to succumb to feelings of incompetence and self-doubt. Furthermore, they note the buffer hypothesis which suggests that high self-esteem guards individuals against the detrimental effects of stress, trauma, and misfortune: all of which should lead to better well-being.

Although self-esteem has been found generally to be a weak predictor of academic achievement (Baumeister et al., 2003; Crocker & Luhtanen, 2003; for an exception see research on academic self-concept, e.g., Marsh & O'Mara, 2008), a clearer empirical linkage exists between self-esteem and well-being. For example, Diener and Diener (1995) studied more than 13,000 college students from 49 universities

☆ Parts of this research were presented at the annual meeting of the American Educational Research Association annual meeting in New York (March, 2008).

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doi:10.1016/j.lindif.2012.07.008

in 31 countries and discovered a positive correlation between self-esteem and happiness ($r = .47$). Also, Pruessner, Hellhammer, and Kirschbaum (1999) found that stress resulting from a difficult task produced higher stress hormones (cortisol) in college students with lower self-esteem than in those with higher self-esteem. Finally, a study by Glendinning (1998) on 1700 pre-college adolescents found that self-esteem was linked to self-ratings of health. Overall, several conceptual viewpoints and empirical studies suggest that a connection between self-esteem and well-being exists.

Perceived control has been defined as a person's belief that they can intentionally influence and predict outcomes in their environment (Perry, 1991; Perry, Hall, & Ruthig, 2005; Skinner, 1996). Perceived academic control is the domain specific variant that applies specifically to students in academic environments. PAC can be particularly important to first-year college students because the large number of new and challenging tasks can make some students feel out of control (Perry, 2003).[1] Several theoretical perspectives suggest that PAC plays a role in students' emotions, stress, and health. Pekrun (2006) states in his control–value theory of emotion that control appraisals are fundamental antecedents of achievement-based emotions; for example, perceptions of control over positive outcomes can lead to greater enjoyment, whereas believing that one cannot influence negative outcomes can result in anxiety. Folkman (1984) argued that perceptions of control reduce stress through the reappraisal of events as less threatening and/or challenging, which then increases the use of coping strategies following failure. Finally, students with higher PAC may be less susceptible to poor physical and psychological health due to their perceived control over balancing academics with a healthy lifestyle, including behaviors such as exercise and healthy eating (Wallston, Wallston, Smith, & Dobbins, 1987).

In support of these perspectives, Pekrun et al. (2004) found German college students' PAC to have a significant positive correlation with joy, hope, and pride, as well as a significant negative correlation with anger, anxiety, shame, and hopelessness. Several studies have found perceptions of control to be negatively correlated with college students' perceived stress (Harari, Jones, & Sek, 1988; Ruthig, Haynes, Stupnisky, & Perry, 2009). Finally, Hall, Chipperfield, Perry, Ruthig, and Goetz (2006) found PAC to be negatively correlated with college students' self-rated physical and psychological health. Much like self-esteem, the linkage between PAC and well-being has been established theoretically and empirically.

The purpose of the current study was to compare perceived academic control and self-esteem as predictors of college students' subjective well-being, defined here as students' self-reported emotions, stress, and health. We chose to focus on these two prominent constructs for several reasons. First, their definitions identify them as distinct theoretically, and therefore represent unique avenues for predicting student well-being. Second, Judge et al. (2002) conducted a meta-analysis of 47 studies and found that the average correlation between self-esteem and locus of control (a construct similar to perceived control) was $r = .52$ (95% CI = .44–.59), indicating these constructs are related yet distinct empirically. Finally, our literature review indicates that both of these constructs independently predict well-being yet very little research has directly compared self-esteem and PAC — unlike more recent comparisons on academic achievement (Ross & Broh, 2000; Stupnisky et al., 2007). An exception is that two studies revealed that self-esteem, compared to locus of control, was more strongly correlated with stress (Abouserie, 1994; Padilla, Alvarez, & Lindholm, 1986); although no studies were found that compared the predictive effects of these variables on students' well-being. Therefore, this study was intended to clarify our understanding of college students and their well-being; in particular, whether self-esteem or PAC more strongly predicts students' emotions, stress, and health.

2. Method

2.1. Participants

The Motivation and Academic Achievement (MAACH) database spans from 1992 to 2008 and consists of self-report data and institutional records for approximately 14,000 Introductory Psychology students in 16 cohorts from a Canadian doctorate-granting university. From the MAACH database, the three cohorts that contained our variables of interest were selected for the current study (1996 $n = 112$, 1997 $n = 186$, 1998 $n = 481$).[2] The samples were aggregated and the pooled sample was used in all analyses.

First-year students who completed both Time 1 (first semester) and Time 2 (second semester) questionnaires and received no additional cognitive interventions were selected for analysis.[3] The study attrition rate from Time 1 to Time 2 was 32.9%, which is typical for studies from the MAACH database and can be attributed to a variety of reasons including students dropping their Introductory Psychology course, leaving university, having completed their required research credits, or forgetting about the second session. Comparisons of completers to non-completers were non-significant on all Time 1 variables (PAC: $t(1151) = 1.98$; self-esteem: $t(1157) = .41$), thus all non-completers of Time 2 were excluded from further analysis. Of those remaining, 10 students were missing responses on 4 to 12 items for unknown reasons and were excluded because their data was deemed unreliable. From the final sample of 779 students, 5.8% ($n = 46$) of students were missing responses to one or two items. These students were retained and their missing values were accounted for with the full information maximum likelihood procedure (FIML, Byrne, 2001; Enders & Bandalos, 2001). The final sample comprised 493 females and 283 males (3 did not indicate gender) who were between the ages of 17 and 22 (17–18 = 77.2%, 19–20 = 17.6%, 21–22 = 5.3%).

2.2. Measures

2.2.1. Self-esteem

The Rosenberg (1965) Self-esteem Scale is a well-established measure that "has received more psychometric analysis and empirical validation than any other self-esteem measure" (Robins, Hendin, & Trzesniewski, 2001, p. 151). The scale consists of five positively-worded and five negatively-worded items measured on a Likert scale (1 = *strongly disagree*; 5 = *strongly agree*; $\alpha = .89$). For all scales, negatively-worded items were reverse coded so that higher scores indicated a higher level on the scale (see Appendix A for items and descriptive statistics).

2.2.2. Perceived academic control

The Perry, Hladkyj, Pekrun, and Pelletier (2001) Perceived Academic Control Scale, which has also been validated and utilized in a considerable number of empirical studies, consists of four positively-worded and four negatively-worded items measured on a Likert scale (1 = *strongly disagree*; 5 = *strongly agree*; $\alpha = .76$).

[1] The distinction between perceived control and self-efficacy is subtle but important. Skinner (1996) distinguished between these constructs as perceived control (the focus of this study) representing an agent–ends relation, or "the extent to which an agent can intentionally produce desired outcomes and prevent undesired ones" (p. 554), and self-efficacy representing an agent–means relations, or "the extent to which a potential means is available to a particular agent" (p. 553).

[2] Stupnisky et al. (2007) utilized the 1996 and 1998 cohorts from the MAACH database. The current study utilized three cohorts from the same database that each contained our variables of interest (1996, 1997, 1998). The additional 1997 cohort was included to cross-validate the findings among a greater number of student samples.

[3] Attributional retraining (AR) is a cognitive intervention that has been found to influence students' PAC and academic achievement (Haynes et al., 2009); thus, all students who received the intervention in the selected cohorts were removed prior to any analysis.