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Personality and Student Self-Handicapping: A Cross-Validated Regression Approach

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Highlights

- We replicate the results of Ross, Canada, and Rausch (2002).
- Personality accounts for 25% of the variance in self-handicapping.
- The prediction of self-handicapping from personality is stable across time.
- The findings suggest choice of coping strategy may be a function of personality.

Abstract

Researchers have suggested that self-handicapping is a function of personality. According to the Five Factor Model, personality can be understood in terms of openness, conscientiousness, extraversion, agreeableness, and neuroticism. Ross, Canada, and Rausch (2002) found lower conscientiousness predicted higher self-handicapping. However, their study was limited by the use of concurrent data. As a result, the purpose of this study was to 1) replicate the findings of Ross, Canada, and Rausch (2002) in predicting self-handicapping from conscientiousness and neuroticism, and 2) extend on those findings by cross-validating the prediction equation in a longitudinal sample. The results essentially replicated the findings of Ross, Canada, and Rausch (2002), and demonstrated the relationship between personality and self-handicapping tendencies was stable over a one-semester timeframe.

Keywords: Personality; Big Five; Self-Handicapping; Cross-Validation; Longitudinal

Personality and Student Self-Handicapping: A Cross-Validated Regression Approach

Students often find themselves faced with intellectual challenges, time-management challenges, and performance challenges in academic settings. Students may use self-handicapping strategies to cope with those challenges they perceive as being too daunting or at which they believe they will fail (Strube, 1986). In self-handicapping, the student may intentionally set up obstacles to success, on which he/she can later blame failure rather than on lack of ability. Self-handicapping is, then, a defense mechanism to protect one's self-esteem in the face of potential failure or poor performance by shifting attributions from internal to external. Self-handicapping has been associated with adverse academic outcomes in prior research (Urduan & Midgley, 2001), and shown to be relatively common among student populations (Strube, 1986). As such, the phenomenon of self-handicapping has become the subject of much research.

Why students self-handicap has been widely studied. Anxiety and fear of failure are strongly connected with self-handicapping in prior research (Burns, Dittmann, Nguyen, & Mitchelson, 2000; Schraw, Wadkins, & Olafson, 2007). This is an intuitively attractive finding, as well, because it is supportive of the theory wherein students who anticipate failure are more likely to seek externalizing attributions for that failure. Students also self-handicap more often when they are lower in self-esteem (Ferrari, 1991; Pullman & Allik, 2008), higher in perfectionism (Doebler, 2000; Pulford, Johnson, & Awaida, 2005), or more extrinsically motivated (Urduan & Midgley, 2001). Self-handicapping has been broadly defined to include behaviors such as illness, lack of sleep, drinking alcohol, using drugs, use of excuses, lack of effort, and many others (Urduan & Midgley, 2001). However, by narrowing down a single behavior, it is easier to investigate predictors. One of the most commonly cited self-handicapping behaviors is procrastination.

In the area of procrastination research, much is known about predictors of generalized academic procrastination. For example, there is a wealth of evidence that procrastination is associated with anxiety (Carden, Bryant, & Moss, 2004; Collins, Onwuegbuzie, & Jiao, 2008; Fritzche, Young, & Hickson, 2003; Owens & Newbegin, 1997). Procrastination has also been directly associated with avoidant coping style (Alexander & Onwuegbuzie, 2007; Burns, Dittman, Nguyen, & Mitchelson, 2000). Meta-analytic work confirms the strong relationship between lower self-efficacy and increased procrastination (Steel, 2007; van Eerde, 2003), and although self-regulation also predicts procrastination, its relationship seems to be mediated by self-efficacy (Strunk & Steele, 2012).

However, others have posited that self-handicapping (and procrastination, for that matter) is a function of personality. This is typically measured in the Five Factor Model of personality, where personality is conceptualized as openness, conscientiousness, extraversion, agreeableness, and neuroticism. Neuroticism and conscientiousness have been consistently linked with generalized academic procrastination, with lower conscientiousness and higher neuroticism predicting higher procrastination (Diaz-Morales, Cohen, & Ferrari, 2008; Steel, 2007; van Eerde, 2003). Ross, Canada, and Rausch (2002) found similar relationships between personality and self-handicapping. That is, lower conscientiousness predicted higher self-handicapping, while higher neuroticism predicted higher self-handicapping. However, their study was limited by the use of concurrent data. The question remains: Will the prediction of self-handicapping by personality remain stable across time? A stable relationship would support the notion that self-handicapping is a personality-based coping strategy for dealing with anticipated or actual failure. Of specific interest were neuroticism and conscientiousness as those two personality factors have been related to self-handicapping in previous research, while other personality factors (i.e.,

openness, extraversion, agreeableness) have not (Diaz-Morales, Cohen, & Ferrari, 2008; Ross, Canada, Rausch, 2002; Steel, 2007; van Eerde, 2003). As a result, the purpose of this study was to 1) replicate the findings of Ross, Canada, and Rausch (2002) in predicting self-handicapping from conscientiousness and neuroticism, and 2) extend on those findings by cross-validating the prediction equation in a longitudinal sample.

Method

Participants

Undergraduate students actively enrolled in traditional coursework at a large Midwestern state university were recruited for participation through an email invitation to their University email account. Participants were offered an incentive for their participation in the form of entry into a drawing for one of four \$50.00 cash awards. There were a total of 1,229 participants, though 102 did not complete the entire survey. Because the 102 represented data that were not missing-at-random, as they left entire questionnaires unanswered, a listwise deletion was performed. This left a total of 1,227 participants in the final data set. The average age of participants was 21.67 ($SD = 5.39$). There were 371 men and 752 women, with 104 not reporting gender. In terms of ethnicity, 862 reported that they were 'White – non-Hispanic', 97 that they were 'American Indian or Alaskan Native', 57 that they were 'Hispanic, Latino, or Spanish Origin', 44 that they were 'Black or African American – non-Hispanic', 34 that they were 'Asian or Pacific Islander', and 29 that they were of 'Other' ethnicities, with 104 not reporting ethnicity. There were 261 freshmen, 262 sophomores, 286 juniors, and 301 seniors in the sample, with 17 reporting 'other' as their college classification, and 100 not reporting college classification. The average GPA was 3.28 ($SD = .53$). All academic majors offered at the university were represented in the sample.

A second email invitation was sent to a randomly selected subset of the original sample one semester later. A total of 143 participated in the follow-up survey, including 43 men and 94 women, with 6 not reporting gender. The average age of participants was 22.84 ($SD = 7.55$). In terms of ethnicity, 113 reported that they were 'White – non-Hispanic', 10 that they were 'American Indian or Alaskan Native', 5 that they were 'Asian or Pacific Islander', 4 that they were 'Hispanic, Latino, or Spanish Origin', 3 that they were 'Black or African American – non-Hispanic', and 3 that they were of 'Other' ethnicities, with 5 not reporting ethnicity. There were 26 freshmen, 32 sophomores, 39 juniors, and 40 seniors in the sample, with 1 reporting 'other' as their college classification, and 5 not reporting college classification. The average GPA was 3.34 ($SD = .49$).

Materials

Mini-IPIP Measure of Personality. The Mini-IPIP is a 20-item scale designed to measure normal personality as defined in the Five Factor Model. In prior research, this scale has shown correlations exceeding .85 with longer, commonly used measures of personality within the Big Five model, establishing criterion validity. Additionally, it has shown good reliability, with alpha coefficients exceeding .70 (Donellan, Oswald, Baird, & Lucas, 2006).

Self-Handicapping Scale – Short Form. The Self-Handicapping Scale – Short Form is a ten-item scale for assessing the degree of general self-handicapping, and has shown moderate reliability in validation studies ($\alpha = .70$; Strube, 1986). The short form scale demonstrates higher reliabilities and shows at least as strong of content validity in terms of correlations with related constructs when compared with the 20 item standard form Self-Handicapping scale (Strube, 1986). It is also one of the most commonly used scales to measure self-handicapping.

Procedure

Participants were recruited via an email message sent to students who were actively enrolled in at least one traditional face-to-face course. The email included a link to the online survey. The first page of the survey was the Informed Consent form, which asked participants to signify their consent by creating their unique participant ID. This ID was used to match responses in the follow up survey for the purposes of tracking longitudinal data. After completing the informed consent and ID creation process, the participant began the measures. Each measure was presented on a separate page, including the demographic questionnaire. Upon completing the entire survey, the participant was directed to a separate survey that asked for first and last name and email address for the purposes of the drawing for the \$50.00 cash award for participation. This was to ensure that the research database remained confidential and without any identifiable information. A randomly selected subset of participants received a second invitation email one semester later, and the procedure for the second survey was identical to the first. All participants were treated in accordance with APA ethical guidelines, and the University Institutional Review Board approved these procedures.

Results

To determine if conscientiousness and neuroticism would predict self-handicapping, and to replicate the findings of Ross, Canada, and Rausch (2002), multiple regression analysis was used. The overall regression equation was statistically significant ($F_{2,1130} = 191.156, p < .001$, $SE_{est} = .74$) and accounted for about 25% of the variance in self-handicapping ($R^2 = .25$). Both conscientiousness ($\beta = -.36, t = -13.96, p < .001$) and neuroticism ($\beta = .32, t = 12.33, p < .001$) were significant predictors of self-handicapping. It appeared that both predictors contributed roughly equally to the prediction of self-handicapping based both on the Beta weights and semi-

partial correlations (see Table 1). Based on the data, the results of Ross, Canada, and Rausch (2002) were essentially replicated.

Because the findings were essentially replicated, it was of interest to cross validate the findings in a longitudinal sample. The unstandardized equation from the concurrent multiple regression on time one data ($\text{Self-Handicapping} = 4.274 - .274(\text{Conscientiousness}) + .21(\text{Neuroticism})$) was applied to predict time-two self-handicapping in order to cross-validate the equation. The correlation between the predicted score using this equation and actual score in time-two data was $r = .499$, suggesting that about 24.9% of the variance in time-two self-handicapping scores was predicted by the time-one regression equation. This is compared to the 25% that was accounted for by the equation calculated in the longitudinal multiple regression analysis. This equivalency suggests that the regression equation from time-one data can be cross-validated on time-two data and that the prediction of self-handicapping by conscientiousness and neuroticism is stable across time.

Discussion

The present study had two research questions: could the findings of Ross, Canada, and Rausch (2002) in predicting self-handicapping from conscientiousness and neuroticism be replicated, and would the prediction equation cross-validate in a longitudinal sample? The results demonstrated that neuroticism and conscientiousness were significant predictors of self-handicapping, essentially replicating the findings of Ross, Canada, and Rausch (2002). These findings suggest there is a link between an individual's personality and their choice of self-handicapping as a protective strategy. These results suggest that self-handicapping may be a result of more fixed and stable factors (i.e., personality) rather than more malleable or situational factors. In fact, the stability of the relationship between personality and self-handicapping was

supported by the cross-validated regression analysis. Cross-validated regression enables extension beyond concurrent regression applications. While Ross, Canada, and Rausch (2002) were able to demonstrate an association between personality (specifically neuroticism and conscientiousness) and self-handicapping, cross-validated regression tests the stability of the regression equation over time. In demonstrating that the regression equation is stable, it is now clearer that, over time, the link between personality and self-handicapping remains similarly strong and gives much room for future explorations of the personality-coping behavior link.

While the current study demonstrated that 25% of the variance can be explained by personality, it is possible that malleable factors would account for additional variance. Future research could focus on other factors, such as motivation variables or environmental influences, in an attempt to explain more of the variance in self-handicapping behavior. Further, if malleable factors do contribute to explaining self-handicapping, this may lead to future intervention research that may result in improved educational practice.

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Regression Table for Time One Data

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