Evaluating the Effects of Academic Contingent Self-Worth on College Students' Performance and Study Habits

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Abstract

College students can derive a sense of their self-worth from their performance in academic domains, a concept known as academic contingent self-worth (Crocker et al., 2003; Crocker & Luhtanen, 2003). This tendency is heightened in higher education, where students spend a lot of time in an environment that centers on grades and are often evaluated to "prove" their learning (Crocker et al., 2003; Fairlamb, 2022). Although many studies have observed the characteristics associated with academic contingent self-worth, few have looked at how academic contingent self-worth relates to performance and behavior over time in a specific course. This study aims to both examine academic contingent self-worth over the course of a semester and to further add to the lists of characteristics associated with academic contingent self-worth while better understanding those previously studied.

Participants were asked to complete a series of questionnaires at the beginning and end of the semester, gathering information on their goal orientations, test anxiety, and attribution of performance. Additionally, participants were asked about their study habits at the beginning of the semester, and after each of the three summative assessments throughout the semester. We will also obtain participants' grades on summative assessments and final course grades at the end of the semester. We expect to find positive relationships between the level of academic contingent self-worth and attribution of performance and academic contingent self-worth and test anxiety. Also, we predict that we will find an association between academic contingent self-worth and performance and academic contingent self-worth and study habits. When adding in the variable of time point during the semester, we expect this association will persist but may change in direction. We plan to explore the relationship between the level of academic contingent self-worth and goal orientation and test anxiety and performance, expecting a positive

relationship for both. The results of this study will provide a clearer picture of how the relationship between academic contingent self-worth, academic performance, and study habits change across the semester. Understanding these relationships can provide insight to both instructors and students concerning student mindset across the semester.

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Introduction

One way people determine their self-worth is based on their performance in specific domains. College students' self-worth is typically tied to academics (Crocker et al., 2003). Specifically, academic contingency is the idea that students derive their self-worth from academic success, thus motivating them to perform well (Crocker & Luhtanen, 2003). Students in higher education experience higher levels of academic contingent self-worth, as they spend a lot of time in an environment that centers on grades and attaining a college degree. Further, our current educational system constantly evaluates students' ability to "prove" their learning, adding emphasis to students' focus on academic performance in their self-worth (Crocker et al., 2003; Fairlamb, 2022). Those who have high levels of academic contingent self-worth are geared toward proving their competence rather than improving it (Fairlamb, 2022). This results in students having more performance-centered (i.e., get an A) goals and less learning-centered goals (i.e., have a better understanding of key concepts) when it comes to a course (Crocker & Luhtanen, 2003). So, in the end, students are not getting the most out of the courses they are taking, as they may leave with a good grade, but will not necessarily remember anything that they learned.

It may seem as though students with high academic contingent self-worth may perform better academically, however, there is no difference in the performance of students with high and low academic contingent self-worth. In some cases, students high in academic self-worth perform poorly when they feel their self-worth is being threatened. The self-worth theory of academic achievement posits that when experiencing failure or setbacks in their goals, a

reinforcing cycle is created as feelings of hopelessness, elevated levels of stress, lack of motivation, and the abandonment of one's goals, ultimately leading to poorer performance (Crocker & Luhtanen, 2003). Thus, students engage in self-handicapping, a series of excuses prepared in advance to provide a rationale for poor performance, some even viewing instructors and TAs as obstacles to their goals, causing them to further withdraw efforts in a course (Fairlamb, 2022; Crocker & Luhtanen, 2003). This becomes especially true when it comes to testing and its high-stakes environment, as levels of academic contingent self-worth have been found to negatively correlate with test performance. A proposed mediating factor between academic contingent self-worth and test performance is levels of test anxiety, with higher levels being associated with a decline in performance. However, controlling for test anxiety levels, in other words, if students are able to manage their levels of test anxiety, can flip the relationship between academic contingent self-worth and test performance to be positive (Fairlamb, 2022).

The current study aims to better understand academic contingent self-worth, how it relates to student performance and the behaviors it is associated with in a course. Specifically, we are interested in how students' levels of academic contingent self-worth are related to students' behavior and performance in a statistics course. We will examine students' study habits, goal orientations, test anxiety, and attribution of performance throughout the semester. We plan to investigate the following questions accompanied by their hypotheses to achieve this:
(1) How do students' levels of academic contingent self-worth relate to their performance and study habits in a course?, (2) How are students' levels of academic contingent self-worth associated with their attribution of success and failure?, and (3) How do students' levels of academic contingent self-worth relate to their test anxiety? Additionally, we will explore students' goal approaches (Mastery-Approach, Mastery-Avoidance, Performance-Approach, and

Performance-Avoidance) and how that will relate to their level of academic contingent self-worth and the relationship between test anxiety and performance.

Methods

Participants

This is an observational study using data collected from surveys students took while enrolled in a large, introductory statistics course at a midwestern university during Fall 2024. All students in the class were invited to participate, provided they were 18 or older. We anticipate that ⅔ of students will choose to enroll in the study, though some data may be excluded based on whether they completed surveys and assignments. The final samples and their demographic information will be determined after the semester is completed and the sample size is finalized.

Materials

Study Habits - Learning Techniques Scale

Students were asked to complete a 47-question survey reflecting on the study habits they use. The questionnaire is broken down into ten subscales: Highlighting/Underlining (i.e., “I find highlighting or underlining information in an assigned reading useful”) (five questions), Summarization (i.e., “After lectures, I write summaries on the information discussed”) (four questions), Keyword Mnemonic (i.e., “I associate keywords with mental imagery to learn verbal material”) (three questions), Imagery for text (i.e., “I form mental images of text materials while reading or listening”) (three questions), Rereading (i.e., “I go back to reread the information I did not comprehend”) (five questions), Interleaved Practice (i.e., “I find using practice that mixes different kinds of problems, within a single study session useful”) (four questions), Elaborative Interrogation (i.e., “I am confident that creating an explanation for why a straightforward fact or concept is true helps me with learning the specific material”) (three questions), Self-Explanation

(i.e., “I find explaining how new information is related to known information useful”) (eight questions), Practice Testing (i.e., “I often am able to recall material on an exam from self-testing or practice tests”) (seven questions), and Distributed Practice (i.e., “I am confident that spacing out my study activities helps me with learning the specific material for class”) (five questions). Participants responded to the questions via Likert scales (1 being ‘Strongly Disagree’ and 6 being ‘Strongly Agree’). Their scores will be determined by taking the average of their responses.

Test Anxiety - Cognitive Test Anxiety Scale - 2nd Edition

Students were asked to complete a 24-question survey to examine their level of test anxiety. They responded to the questions via Likert scales (1 = ‘Not at All Typical of Me,’ 2 = ‘Somewhat Typical of Me,’ 3 = ‘Quite Typical of Me,’ and 4 = ‘Very Typical of Me’). Their responses will be added up to create a sum score where they will be categorized into the following subscales: Low Cognitive Test Anxiety (CTAS-2 scores: 24 – 43), Moderate Cognitive Test Anxiety (CTAS-2 scores: 44 – 66), and High Cognitive Test Anxiety (CTAS-2 scores: 67 and above).

Attribution of Performance - Academic Success and Failure Attribution Questionnaire

Students were asked to complete a 24-question survey where they reflected on what causes them to pass or fail an exam. The questions were broken down into the following three subscales with eight questions for each: Controllable Internal Attributions (i.e., “I pass because I spend a lot of time preparing for the exams” or “I fail because I spend little time preparing for exams”), Uncontrollable Internal Attributions (i.e., “I pass because I am very intelligent” or “I fail because I’m not very smart”), and Uncontrollable External Attributions (i.e., “I pass because my teachers explain the topics very well” or “I fail because my teachers do not explain the

subjects well"). Participants responded to the questions via Likert scales (1 being 'Not At All Agree,' 5 being 'Totally Agree'). Their responses will be added up to create a sum score.

Goal Approaches - Achievement Goal Questionnaire-Revised (AGQ-R)

Students were asked to complete a 12-question survey where they indicated their goals for the course. The questions were broken down into the following four subscales with three questions for each: Mastery-Approach (i.e., "I am striving to understand the content of this course as thoroughly as possible"), Mastery-Avoidance (i.e., "I am striving to avoid an incomplete understanding of the course material"), Performance-Approach (i.e., "My goal is to perform better than the other students"), and Performance-Avoidance (i.e., "My goal is to avoid performing poorly compared to others"). Participants responded to the questions via Likert scales (1 being 'Strongly Disagree' and 5 being 'Strongly Agree'). Their scores will be determined by taking the average of their responses.

A***cademic Contingent Self-Worth - Basing Self-Worth on Academics Scale***

Students were asked to complete a 7-question survey to assess their level of academic contingent self-worth. The questions were broken down into the following two subscales: Negative Contingency (i.e., "I would feel worthless if I did poorly on a course test") (four questions) and Positive Contingency (i.e., "My feelings of self-respect would increase if I did well on a course test") (three questions). Participants responded to the questions via Likert scales (1 = 'Strongly Disagree,' 2 = 'Disagree,' 3 = 'Slightly Disagree,' 4 = 'Slightly Agree,' 5 = 'Agree,' 6 = 'Strongly Agree'). Their responses will be added up to create a sum score.

Procedure

At the beginning of the course, students were introduced to the study where it was stressed to them that their participation in this study will not affect their grade in the course, and

their identifiable data will not be accessed by the instructor during the semester. A study team member unaffiliated with the course obtained informed consent, and students were asked to fill out the consent form via Qualtrics survey. Those who consented to participate completed a demographics survey and consented to the use of class assignments for research purposes. These included a course pre-survey, which included the Basing Self-Worth on Academics Scale, the Learning Techniques Scale, the Achievement Goal Questionnaire-Revised (AGQ-R), the Cognitive Test Anxiety Scale - 2nd Edition, and the Academic Success and Failure Attribution Questionnaire. During week seven, students completed their first summative assessment, a take-home, open-note case study, and a semester check-in where they were asked to reflect on their study habits and performance. They will complete the same reflective check-in after their second case study during week 13 and after their final. Students will be assigned to complete a post-class reflection, which includes similar measures to the preclass survey. Final grades and grades on the case studies will be obtained as data at the end of the course. Data at the end of the semester will be de-identified and then analyzed.

Analysis Plan

We will analyze collected data to better understand the relationships between academic contingent self-worth, student performance in the class, and student behaviors. To examine how students' level of academic contingent self-worth relates to their performance (i.e., overall grade in the course and grades on summative assignments) in the course and throughout it, we will perform regression analyses. We predict that academic contingent self-worth will be associated with overall performance in the class. We predict that academic contingent self-worth will be associated with performance on the first summative assignment. We expect that the time point during the semester and academic contingent self-worth will be associated with academic

performance. To examine how students' level of academic contingent self-worth relates to their study habits, we will perform regression analyses. We expect that academic contingent self-worth will be associated with study habits. We expect that the time point during the semester and academic contingent self-worth will be associated with study habits over time. For the regressions listed above, preliminary analyses will include test anxiety and demographic information. If any of these are statistically significant, we will include them in the models listed below.

Similarly, to better understand how students' levels of academic contingent self-worth are associated with their attribution of success and failure, we plan to perform correlation analyses. We predict that as students' academic contingent self-worth increases, their attribute of success to controllable internal attributions will increase as well. We predict that as students' academic contingent self-worth increases, their attribute of success to uncontrollable internal attributions will increase as well. We predict that as students' academic contingent self-worth increases, their attribute of failure to uncontrollable external attributions will increase as well. To examine how students' levels of academic contingent self-worth relate to their test anxiety, we will perform a correlation between the level of test anxiety and the level of academic contingent self-worth. We expect students with higher levels of academic contingent self-worth will have high levels of test anxiety.

Implications

We expect to find that students with higher levels of academic contingent self-worth will have high levels of performance, and will have high scores on the Learning Techniques Scale at the beginning of the course as they are given a chance to prove their competence (Crocker et al., 2003). However over time, will experience a decrease in their performance and scores as course

concepts become more challenging and complex as they may experience setbacks (i.e., getting a bad grade on an assignment), seeing them as potential threats to their self-worth, thus causing them to disengage with the course (Crocker & Luhtanen, 2003; Fairlamb, 2022). Furthermore, We expect that students with higher levels of academic contingent self-worth will attribute their success to high levels of controllable internal attributions and uncontrollable internal attributions (however, during the analysis both will be looked at as separate relationships) because they view it as a reflection of their intelligence and personal value. We predict that students with higher levels of academic contingent self-worth will attribute their failure to high levels of uncontrollable external attributions because they will engage in self-handicapping, externalizing it as a form of self-protection (Fairlamb, 2022). Lastly, we expect students with higher levels of academic contingent self-worth will have increased levels of test anxiety as the testing environment can result in feelings of pressure to prove their competency (Fairlamb, 2022).

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