
Desire for Control and Academic Performance

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Abstract

The relationship between individual differences in desire for control and academic performance was examined in a prospective study. University students' desire for control scores were used to predict grades over a two-year period. Higher desire for control scores were associated with higher grades for each of the two years following testing. High desire for control subjects predicted they would receive higher grades, but were no more accurate than lows in these predictions. High desire for control subjects also indicated they placed a greater importance on grades than lows and reported studying more in a typical week, although desire for control was not associated with how much studying students did before a test. The findings complement those of earlier laboratory studies indicating a positive relationship between desire for control and achievement.

Résumé

La relation entre le désir de contrôle et la performance scolaire a fait l'objet d'une étude prospective. Les scores résultant d'une évaluation du désir de contrôle manifesté par des étudiants universitaires à l'égard des résultats scolaires ont servi à prédire les notes que ces étudiants obtiendraient pendant une période de deux ans. Les étudiants dont les scores liés au désir de contrôle étaient parmi les plus élevés de l'échantillon ont obtenu des résultats scolaires supérieurs pendant les deux années suivant l'évaluation. Les étudiants manifestant un désir de contrôle élevé ont prédit qu'ils obtiendraient des résultats supérieurs; cependant leurs prédictions ne se sont pas avérées plus justes que celles des sujets dont le désir de contrôle était moins fort. Les sujets ayant un grand désir de contrôle ont également indiqué qu'ils accordaient une plus grande importance aux résultats scolaires et qu'ils consacraient aussi plus de temps à l'étude au cours d'une semaine type; par contre, aucune corrélation n'a été établie entre le désir de contrôle et le temps consacré à l'étude en vue d'un examen. Les résultats de cette étude s'ajoutent à ceux des recherches antérieures en laboratoire, qui démontrent une relation positive entre le désir de contrôle et la réussite.

For more than a decade, researchers have examined individual differences in the extent to which people are motivated to feel as if they are in control of the events in their lives. This personality variable, called desire for control, has now been examined in more than a hundred investigations (Burger, 1992). High desire for control people prefer to make their own decisions, typically take responsibility for group projects, and are reluctant to relinquish control to others. Low desire for control people are more comfortable letting others make decisions for them and are less likely to take on a leadership role in a group setting.

Research indicates that desire for control, how much personal control people *prefer*, is not the same as the well-researched construct of locus of control, how much personal control people *perceive*. Several studies have found that the Desirability of Control Scale (Burger & Cooper, 1979) does not correlate with Rotter's (1966) Locus of Control Scale, and correlates only weakly or moderately with other locus of control measures (Burger, 1992). In addition, researchers have produced different patterns of results when examining desire for control scores and locus of control scores (Hatton, Gilden, Edwards, Cutler, Kron & McAnulty, 1989; Zimmerman & Rappaport, 1988).

Individual differences in desire for control have been related to numerous behaviours of interest to psychologists. For example, compared to lows, high desire for control people are more susceptible to learned helplessness and depression (Burger, 1984; Burger & Arkin, 1980), more likely to try to control a conversation (Burger, 1990; Dembroski, MacDougall & Musante, 1984), and more likely to get involved in community and political activities (Zimmerman & Rappaport, 1988). High desire for control people also are less likely than lows to conform to norm pressures (Burger, 1987a), do a better job in leadership roles (Reed, 1989), and are less likely to suffer from loneliness (Solano, 1987). In addition, recent research suggests that desire for control is related to physiological reactivity and health (Hatton, et al., 1989; Lawler, Schmied, Armstead & Lacy, 1990; Smith, Woodward, Wallston, Wallston, Rye & Zylstra, 1988; Woodward & Wallston, 1987).

The present investigation is concerned with another important set of behaviours that researchers have linked to desire for control, namely achievement behaviours. I have argued elsewhere that high desire for control subjects are more likely than lows to see achievement situations as opportunities to demonstrate their mastery and reinforce their sense of personal control (Burger, 1985). Conversely, challenging tasks can be a threat to the high desire for control person's need to feel in control. Admitting that one is unable to meet the challenge of an important task that others seem capable of achieving is particularly threatening to the person with a high desire for control.

Based on this reasoning, I identified four behaviours typical of high desire for control people that should facilitate performance on achievement tasks

(Burger, 1985). First, in a series of laboratory experiments, high desire for control subjects set higher goals for themselves or selected more difficult tasks than did lows. Clearly, setting higher expectations for one's performance is an important step toward reaching higher levels of achievement. Moreover, subjects in one of these experiments were given feedback on their performance after each of six puzzles and asked to make a new prediction for the next puzzle. Although all subjects overestimated their ability to perform the task initially, high desire for control subjects did a better job than lows of adjusting their estimates to more realistically reflect their performances.

A second relevant difference between high and low desire for control people concerns how they respond to challenges. High desire for control people do not necessarily work harder than lows on every achievement task. Rather, high desire for control subjects appear to expend extra effort when faced with a challenging task (Burger, 1985, 1987b). Relatively simple and uninvolved tasks apparently offer little opportunity to demonstrate one's mastery and represent little threat to the high desire for control person's need to feel in control of the situation.

Third, high desire for control subjects persist longer at difficult tasks than lows. When subjects were given impossible tasks to work on, low desire for control subjects were more likely than highs to move on to the next problem as soon as the task became difficult (Burger, 1985). This persistence should pay off in higher achievement for high desire for control people facing particularly challenging tasks.

Finally, high desire for control subjects make attributions for their successes and failures that should facilitate performance on subsequent tasks. High desire for control subjects are more likely than lows to attribute their successes to personal causes and their failures to such factors as luck (Burger, 1985, 1987b). This attributional pattern has been associated with higher effort on subsequent related tasks. However, although this pattern of attributions is often found for high desire for control subjects, two studies have failed to find that these attributions were related to the subjects' performance on later tasks (Burger, 1987b).

Taken together, the research findings suggest that high desire for control people typically should perform better in achievement situations than lows. However, this conclusion should be tempered a bit. As I have noted elsewhere (Burger, 1985, 1992), each of the achievement-related behaviours associated with a high desire for control can also lead to a poorer performance in some situations. For example, high desire for control people may set their aspiration levels unrealistically high. They may expend too much effort on impossible tasks and may suffer more than lows from the frustration of not being able to achieve their goals. Beyond this, all of the research to date demonstrating superior achievement in high desire for control subjects has been uncovered in highly-controlled laboratory tasks. It remains to be seen if these effects can be found in the more complex achievement settings that

exist outside the lab.

Consequently, the present investigation was designed to examine the relationship between desire for control and achievement in an applied setting. Specifically, I used desire for control scores to predict college students' grades over a two-year period. Attainment of high grades, particularly at the competitive school in which the study was conducted, is a fairly involving achievement task for most university students. Grades also provide a fairly clear and meaningful indicator of performance. Consequently, academic performance provides a fairly unambiguous measure of achievement.

Three questions were addressed in the study. First, I wanted to examine the relationship between desire for control and academic performance. Based on the reasoning described above and findings from the laboratory experiments, I expected high desire for control students to make higher grades than lows. Second, I was interested in the students' aspiration levels and how well they could predict their academic performance. Laboratory research has found that high desire for control subjects predict they will do better than lows and are better able to adjust their predictions to more reasonable levels when given feedback indicating that their initial predictions are out of line (Burger, 1985). Thus, I expected that high desire for control students would make higher predictions for their future grades than would lows. However, in the absence of incremental feedback and opportunities to adjust their predictions, it was not clear that high desire for control students' predictions would be more accurate than those made by lows.

Third, I examined the importance students placed on grades and their self-reported study habits. I expected that high desire for control students would place greater importance on grades than lows. I also expected that these students would consequently spend more time studying and doing school work than lows. However, one might argue that high desire for control students would not necessarily spend more time cramming for a test. If low desire for control students are less motivated to do well in school than highs, they might put off studying until the last minute. Thus, I looked at how much the students studied in the typical week as well as how much time they spent studying for a specific test.

Method

SUBJECTS

Sixty-five male and female undergraduates served as subjects in exchange for class credit. Nearly all were either freshmen or sophomores at the time of their participation.

MATERIALS

Desire for control was measured with the Desirability of Control (DC) Scale (Burger & Cooper, 1979). The DC Scale is a self-report inventory that asks test takers to indicate on seven-point scales the extent to which each of 20 state-

TABLE 1
Grade Point Averages by DC Score Half

	High-DC	Low-DC	<i>p</i>
First Year GPA	2.91	2.68	.05
Second Year GPA	2.99	2.73	.001
Two-Year GPA	2.94	2.71	.001

ments applies to them (for example, "I would prefer to be a leader than a follower," "Others usually know what is best for me"). The scale has good internal consistency and test-retest reliability, and has been shown to have reasonable discriminant validity when compared with scales measuring such constructs as locus of control and Type A behaviour (Burger, 1992).

PROCEDURE

Subjects participated in the study during the sixth week of a 10-week quarter during the fall term. Subjects completed the Desirability of Control (DC) Scale (Burger & Cooper, 1979) and a short questionnaire with several items asking subjects about their academic behaviour. Subjects were asked to estimate their grade point average for the current quarter and for that entire academic year (three quarters). Subjects then were asked to indicate on a nine-point scale the extent to which they felt grades were important to them. Finally, subjects were asked to estimate how many hours per week they worked on schoolwork outside of class and how many hours they typically spent studying for a test as important as a midterm exam. After completing the questionnaire, subjects were asked to sign a permission slip allowing the experimenter to look at their academic records in the future to compare their grades with some of the measures that had been taken.

Two years later, the experimenter examined the records that were available for those subjects who had given permission. Eleven of the 65 subjects denied permission to examine their grade records. In addition, 15 students were no longer enrolled at the university, and thus their records were not available. One student was currently enrolled, but had left school for three quarters before returning. Students who were dropped from the final sample did not differ from those who remained in terms of DC scores or any of the measures on the initial questionnaire.

Results

I divided subjects into high and low DC halves, via a median split of their DC scale scores, and compared grade point averages for the two years separately and combined. As shown in Table 1, the high desire for control subjects had significantly higher grades than the lows on all three of these measures. Another way to examine these data is to identify the number of subjects reaching a 3.00 or better GPA for the two-year period. When I looked at the

TABLE 2
Correlations between DC Scale Scores and Dependent Measures

Questionnaire Item	Correlation with DC Scale
1st Quarter Prediction	.39**
Year Prediction	.42**
1st Quarter Accuracy	.09
Year Accuracy	-.01
Importance of Grades	.22*
Hours Studying/Week	.21*
Hours Studying/Midterm	.05

* $p < .05$; ** $p < .001$

number of high and low desire for control students who met this standard, a fairly clear pattern emerged. Fifty-five percent (11/20) of the high desire for control subjects had a GPA of 3.00 or better, whereas only 11.1 percent (2/18) of the low desire for control subjects did, $\chi^2(1, N = 38) = 8.11, p < .01$. Put another way, 84.6 percent of the students in the sample who achieved a GPA of 3.00 or better during this two-year period were high desire for control students.¹

Students also had been asked to predict their GPAs for the quarter in which they took the DC Scale and for that entire academic year. As shown in Table 2, there was a strong relationship between these measures, with higher predictions associated with higher DC scores. The accuracy of these predictions also was examined for the subjects for whom grades were available. An accuracy score was calculated by taking the absolute value of the difference between the predicted GPA and the acquired GPA for the first quarter and for the academic year. These scores then were correlated with the DC Scale scores. However, no significant relationships were found.

Finally, we compared DC Scale scores with subjects's responses to questions about the importance they placed on academic performance and their studying behaviour. As shown in Table 2, although the relationships are not strong, higher DC scores were associated with a greater importance being placed on grades and with the a greater number of hours devoted to studying each week. However, there was no significant relationship between DC scores and hours spent studying for a midterm exam.

Discussion

The findings provide additional support for the model outlined earlier for the

¹ Correlational analyses between desire for control and grades produced similar, but weaker, statistical results. One reason for this may have been that a few subjects' grades were noticeably different than expected. For example, one student with an extremely high DC score had a 1.80 GPA her first year.

relationship between individual differences in desire for control and achievement behaviour (Burger, 1985). Consistent with earlier laboratory findings, high desire for control students had higher academic aspirations and achieved higher grades than lows. I interpret this to mean that high desire for control students see academic evaluation as an opportunity to demonstrate to themselves and others their ability to control an important and challenging set of events in their lives. The other side of this is that the high desire for control students may also have found grades threatening to their sense of control. That is, not doing well in a class tells a student that he or she has been unable to master the challenges of that class. This can be particularly threatening to the high desire for control student when others demonstrate their ability to master the material. Consistent with this interpretation, high desire for control students reported that achieving good grades was more important for them than did lows.

Interestingly, high desire for control students were no more accurate than lows in predicting what their grades would be. Past research found that highs were able to make more accurate predictions for their performances than lows. However, that research provided subjects with feedback and an opportunity to adjust their predictions after each trial. It is possible that if students were asked to estimate their grades each term, high desire for control students might learn to make more accurate predictions than lows as they moved from freshmen to seniors.

The study also found an interesting difference in the self-reported study habits of high and low desire for control students. High desire for control students put more time into school work during a typical week, but there was no difference between highs and lows in terms of how much they study for a midterm exam. Perhaps the reason for this is that low desire for control students are not as motivated to do well in their classes generally and wait until an important exam approaches to hit the books.

A few notes of caution in interpreting the findings also need to be mentioned. First, like most individual difference research, there remains the possibility that another personality variable that correlates with desire for control may be contributing to the findings. For example, I cannot rule out the possibility that differences in backgrounds or intelligence associated with desire for control level might not have influenced differences in academic performance. In addition, there is always the question of causality. That is, it is possible that a poor academic performance could lead to a lower desire for control, rather than the other way around. However, this interpretation is less plausible given the two-year prospective nature of the study and the comparable findings in several laboratory investigations.

In summary, the results of this experiment provide much needed external validation for earlier laboratory findings. Although there are reasons to argue that a high desire for control can both help and hinder one's performance in an achievement situation, a high desire for control was clearly associated with

higher performance in the real-world example of achievement examined here. Although future research may identify tasks for which a low desire for control is preferable, to date all evidence points to a higher performance by the high desire for control person.

Some of the data reported here were presented at the annual meeting of the American Psychological Association, San Francisco, 1991. Requests for reprints should be addressed to Jerry M. Burger, Department of Psychology, Santa Clara University, Santa Clara, CA 95053.

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