2007

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Recommended Citation

Forsyth, Donelson R., Natalie K. Lawrence, Jeni L. Burnette, and Roy F. Baumeister. "Attempting to Improve the Academic Performance of Struggling College Students by Bolstering Their Self–Esteem: An Intervention That Backfired." *Journal of Social and Clinical Psychology* 26, no. 4 (2007): 447-59. doi:10.1521/jscp.2007.26.4.447.

Journal of Social and Clinical Psychology, Vol. 26, No. 4, 2007, pp. 447–459

ATTEMPTING TO IMPROVE THE ACADEMIC PERFORMANCE OF STRUGGLING COLLEGE STUDENTS BY BOLSTERING THEIR SELF–ESTEEM: AN INTERVENTION THAT BACKFIRED

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Theory and prior research suggest that (a) a positive sense of self–worth and (b) perceived control over one's outcomes facilitate constructive responses to negative outcomes. We therefore predicted that encouraging students to maintain their sense of self–worth and/or construe their academic outcomes as controllable would promote achievement. In a field experiment, low–performing students in a psychology class were randomly assigned to receive, each week, review questions, review questions plus self–esteem bolstering, or review questions plus exhortations to assume responsibility and control. Contrary to predictions, the D and F students got worse as a result of self–esteem bolstering and students in the other conditions did not change. These findings raise ethical and practical questions about the widespread practice of bolstering self–esteem in the hope of improving academic performance.

Portions of his manuscript were reported at the Annual Meetings of the American Psychological Association.

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People may claim they are inspired by the Delphic command to "know thyself," but the self they tend to seek is one that is uniquely superior to others and in control of important outcomes (Dunning, Heath, & Suls, 2004). Of the self's many motives, maintaining adequately high self–esteem and achieving a sense of control over the environment are among the most commonly observed in Western civilization (e.g., Baumeister, 1998; Leary, 2004). Both these needs have captured the imagination of researchers as important keys to psychological functioning. Students' success in school, in particular, is widely thought to suffer if either self–esteem or a sense of control is lost.

The present research was a field experiment that sought to improve the performance of below–average students in a psychology course by bolstering either their self–esteem or their sense of control. It was guided by the sincerely optimistic belief that these interventions would succeed and could then form the model for both further research and practical interventions. There would be immense social value if one could establish social interventions that improved learning and test–taking. Folk wisdom and some findings indicate that school performance is mainly a function of intelligence and studying (Sternberg, 1998), but insofar as intelligence is hard to change, and studying can be tedious and aversive, other ways of improving educational outcomes would be welcome.

Bolstering self–esteem has long seemed a promising and appealing way to improve student performance. Researchers began to find positive correlations between self–esteem and school performance (grades and test scores) in the 1960s, and by 1979 Wylie concluded that the link was sufficiently well–replicated to be considered a proven fact, although the correlations were typically relatively modest (Valentine, DuBois, & Cooper, 2004). Socially concerned persons speculated that the disturbingly low academic performance of some stigmatized minority groups might be caused by their low self–esteem resulting from society's messages of inferiority. Sound theoretical arguments further supported the idea that self–esteem contributes to improved performance, for high self–esteem should lead to setting higher goals and the confidence needed to bounce back from initial failure with renewed effort (see Bachman & O'Malley, 1977; Di Paula & Campbell, 2002; McFarlin & Baumeister, 1984). The view that confidence promotes effort and thereby brings success is deeply rooted in American culture.

Hence, it is hardly surprising that many schools began using self–esteem bolstering programs in the justifiable hope that this would lead to better school performance. The self–esteem programs proved popular with both teachers and students, possibly because exercises in self–praise and reciprocal flattery are somewhat more enjoyable uses of class time than, say, doing arithmetic. A 2006 Google.com search for "el-

ementary school mission statement self–esteem" found 308,000 web sites (Twenge, 2006). Generally those mission statements say that elevating self–esteem of students is a primary goal to be pursued in advance of academic performance rather than as a result.

In retrospect, there were some reasons to doubt that bolstering self–esteem would bear fruit in terms of improved test scores. The well–established positive correlation between self–esteem and academic performance that Wylie (1979) affirmed was not necessarily due to the causal effects of self–esteem. Rather, good grades in school were more likely the cause of increases in self–esteem (alongside third–variable causes; see Bachman & O'Malley, 1977, 1986; Maruyama, Rubin, & Kingsbury, 1981). The minority groups turned out not to suffer uniformly from low self–esteem as had been supposed (Crocker & Major, 1989; Twenge & Crocker, 2002), and Sommers (1995) pointed out that the group data on school performance of White and Black boys and girls suggested an inverse correlation with self–esteem, such that White girls had the lowest average self–esteem and the best school records, while Black boys scored highest on self–esteem but lowest in school performance. As for interventions aimed specifically at boosting self–esteem, an early literature review by Scheirer and Kraut (1979) reached the pessimistic conclusion that these interventions do not succeed at improving school performance. Similarly, Valentine and his colleagues (2004), in their meta–analytic synthesis of studies that measured self–esteem and performance at several points in time, concluded the evidence did not support "interventions that are aimed solely at improving students' views of themselves" (p. 129).

The lack of evidence about the academic benefits of bolstering self–esteem, despite the widespread school programs, may also reflect methodological drawbacks. The very belief in the value of self–esteem has made it seem cruel and unethical to withhold these benefits from some students, so most interventions lack any sort of control group that could be used as a comparison baseline to assess the value of boosting self–esteem. The present study was designed with random assignment of individual participants to self–esteem boosting or not, and we suspect that almost no elementary or secondary school self–esteem program is administered on that basis. This study offers an opportunity to assess the effects of self–esteem bolstering on academic performance with an experimental design.

Personal control was a second focus of the present investigation. As with self–esteem, we had ample theoretical and empirical justification for predicting that bolstering a sense of control would improve test performance. In school, control means taking responsibility for one's work and attributing performance to inner causes, especially effort. Prior evi-

dence indicates that a sense of being unable to control one's outcomes can be debilitating, even paralyzing, in the form of learned helplessness (Seligman, 1975). Students who regularly attribute their grades to factors they control are more successful than those who think they do not control their academic outcomes (Diener & Dweck, 1980). When Dweck (1975) trained children to attribute their failures to lack of effort—an internal, controllable cause—they showed improved persistence after initial failure. Wilson and Linville (1982, 1985) used attributional training to convince college students that most of their peers managed to improve their grades over the course of their college careers. Relative to controls, these students were less likely to drop out and their grades improved. Noel, Forsyth, and Kelley (1987) similarly found that students who were failing a psychology class responded well when their attributions were shifted away from external, uncontrollable factors (such as "difficult test") to internal, controllable causes (such as effort and motivation). This attributional bolstering of the sense of personal control and responsibility led to higher grades at the end of the course, as compared to a control group.

The present study targeted all students who received C, D, or F on the first examination in a large psychology course. By random assignment, some received weekly messages for the rest of the term aimed at bolstering their self–esteem. A second group received messages aimed at bolstering the sense of internal control and personal responsibility. A third group received no such intervention, but all three groups did receive weekly review questions as study aids. This design is consistent with the procedures used in many school self–esteem programs, including for–profit interventions. These programs usually include study skills training, seemingly in implicit acknowledgment that bolstering self–esteem alone is not enough. The present investigation offered a rare chance to separate the benefits of self–esteem bolstering from study aids, even while using both together in the crucial condition.

We undertook this study expecting that academic performance would improve from both the self–esteem and the internal/control interventions, but that either one might prove more effective than the other. We felt it was ethically acceptable to include a control group that did not receive any such intervention because they were essentially receiving the same treatment that most students in most classes received, and so no group was put at a disadvantage relative to every day life. Moreover, if we could establish that one or possibly both interventions reliably improved learning and/or test performance, then these findings could benefit many students. Our a priori hypothesizing was mainly divided as to whether the self–esteem or the internal/control intervention would prove more successful at improving grades.

METHOD

PARTICIPANTS

All students who received a C, D, or F (thus below 80% correct) on the first major examination in a large psychology class, and who had student email accounts listed on the class listserve were invited to participate in return for partial course credit. Thus, 141 of 305 students received invitations, 51 failed to respond. The remaining 90 (68 women) took part. They were tracked in two groups, based on having earned a C (N = 45) versus a D or F (N = 45). Four students withdrew before the semester ended, leaving a final sample of 86.

PROCEDURE

The entire study was conducted via electronic mail. Participants were initially contacted via the student email accounts and invited to take part in a study concerned with "communication and the use of email." Participants were told that the purpose of the emails was to provide them with information about academic performance. Each week they would receive a message containing a review question pertaining to the material covered in class, and they were required to acknowledge receipt of the email within 24 hours to qualify for their credit as participants.

We then randomly assigned students into one of 3 conditions: no–message control, internal/control, and self–esteem bolstering. Participants in the control condition received only the review question each week. Participants in the internal/control condition also received the review question, but it was accompanied by messages (based on those used by Noel et al., 1987) that encouraged them to take responsibility for their performance in the course. The first message, for example, stated:

> Past research suggests that when students get back their tests, they tend to blame poor scores on external factors: they say things like "the test was too hard," or "the prof didn't explain that," or "the questions are too picky." Other studies suggest, though, that students who take responsibility for their grades not only get better grades, but they also learn that they, personally, can control the grades they get . . . Bottom line: Take personal control of your performance.

Students in the self–esteem bolstering condition also received the review questions, but their email messages stressed the importance of maintaining high self–esteem. The first message, for example, stated:

> Past research suggests that when students get back their tests, they tend

> to lose confidence: they say things like "I can't do this," or "I'm worthless," or "I'm not as good as other people in college." Other studies suggest, though, that students who have high self–esteem not only get better grades, but they remain self–confident and assured . . . Bottom line: Hold your head—and your self–esteem—high.

We sent students an email message each week for a total of 6 weeks. They received the last message the week before they completed the final examination in the class, which we used as a measure of the impact of each type of message on their academic performance.

As a manipulation check, the last email message also asked participants to indicate their degree of agreement, on a 5–point scale that ranged from *Agree Strongly* (5) to *Disagree Strongly* (1), with 4 statements pertaining to control and self–esteem. We averaged the items "I am in control of my grades in Psychology 101" and "There are things that I can do to control my grade in Psychology 101" to obtain an index of control perceptions and the items "I feel good about myself as a student in Psychology 101" and "I feel good about myself in general" to form a index of self–esteem. Seventeen students did not provide responses to these items.

RESULTS

The average grade on the final examination, across the entire class of 255, was 69.0%, a decrease from the first test mean of 74.8%. The students who participated in the study were all ones who had earned Cs or lower on the first test, and their grades declined from 67.7% to 63.5%. Exam scores did not differ by sex; $F(1, 84) = 0.44$, *ns.*

ACADEMIC OUTCOMES

The main dependent measure was score on the final examination, measured as percentage correct. We examined these scores using a 2 (Test 1 Grade: C vs. D/F) × 3 (Condition: No–Message Control, Internal/Control, and Self–esteem Bolstering) × 2 (Sex) × 2 (Test: Test 1 vs. Final) mixed ANOVA, with repeated measures on the final factor. Two effects that emerged in this analysis, the main effect of time, $F(1, 74) = 12.40$, $p < .01$, $\eta^2 = .14$ and the interaction of time and condition, $F(2, 74) = 3.08$, $p = .05$, $\eta^2 = .08$, were qualified by the 3–way interaction of time, condition, and grade graphed in Figure 1; $F(2, 74) = 3.10$, $p = .05$, $\eta^2 = .08$. The pattern of students' grades was the opposite of our predictions, and in fact D and F students in the self–esteem bolstering condition showed a substantial drop in grades from the midterm (57% correct) to 38% on the fi-

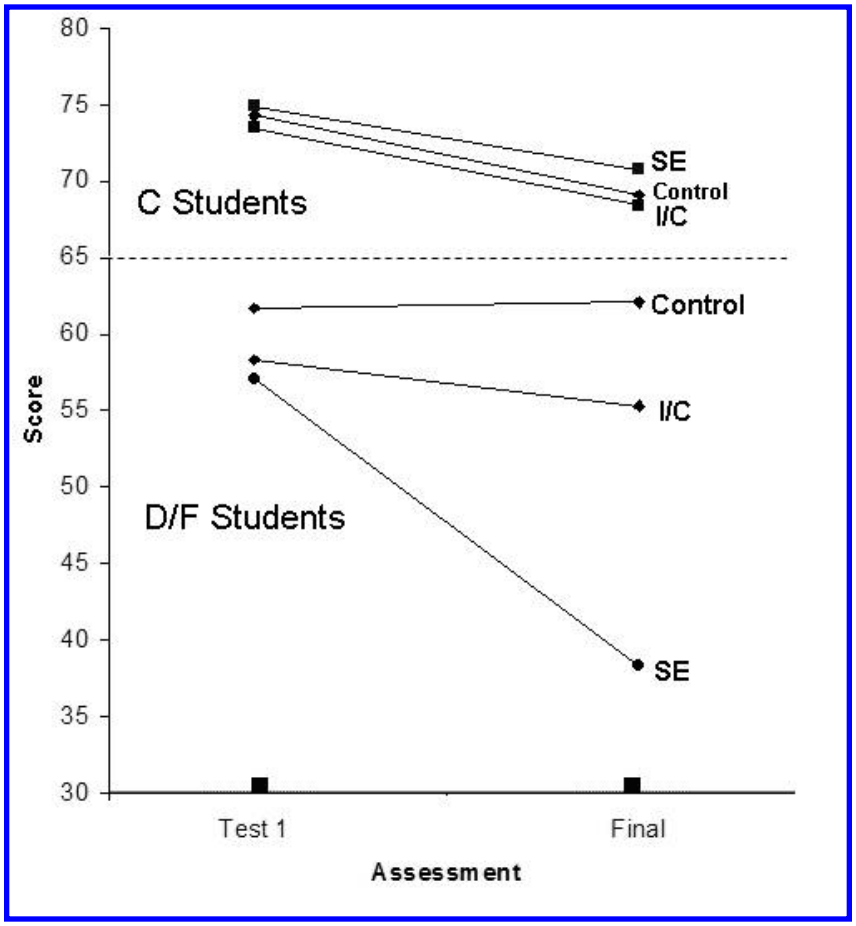

FIGURE 1. Mean examination scores for C and D/F students in the Self-esteem (SE) bolstering condition, the Internal/Controllable Condition, and the Control condition.

nal. This drop in scores was significant both statistically ($p < .05$) and academically (dropping from the borderline for passing into the low F range). The grades for C students declined somewhat from the first test to the final, but the decrements did not vary systematically as a function of message condition. The D and F students in the no–message control condition and in the internal/controllability condition did not change.

SELF–ESTEEM AND CONTROL

A 2 (Test 1 Grade: C grade vs. D/F grade) × 3 (Condition: Control, Internal/Control, and Self–esteem) × 2 (Sex) ANOVA of the control and self–esteem indexes yielded limited support for the effectiveness of the manipulations. Given the relatively high rate of non–responses on the final questionnaire and the possible unreliability of these 2–item scales, we suggest these effects be interpreted cautiously.

Self–esteem. Treatment condition had only a marginal effect on the two items measuring self–esteem; $F(2, 57) = 2.32$ $p < .11$, $\eta^2 = .08$. However, Duncan's New Multiple Range Test indicated that students in the self–esteem condition (M = 4.3) reported more positive self–evaluations than students in the internal/control condition (M = 3.7), while the control condition (M = 3.9) fell in between and did not differ from either. Moreover, these findings may reflect a restriction in range caused by a ceiling effect: 70% of respondents in the self–esteem bolstering condition and 50% of respondents in the other two conditions gave themselves the highest possible rating on these items.[1]

Control. The only significant effect in the ANOVA of the control index was the main effect of condition; $F(2, 57) = 3.58$ $p < .05$, $\eta^2 = .11$. Duncan's New Multiple Range Test indicated that students in the self–esteem condition (M = 4.8) reported higher feelings of control than students in the no–message condition (M = 4.3). The mean for the internal/control condition (M = 4.5) fell intermediate and did no differ from either.

Correlational analyses. Sense of control and self–esteem were positively correlated; $r(69) = .24$. Only self–esteem, however, was positively correlated with both first exam grade, $r(69) = .34$ and final exam grade, $r(69) = .26$, ps < .05. When the latter correlation was corrected for the former, it became nonsignificant; $r(66) = .09$, *ns*. These results replicate earlier findings that high self–esteem is correlated with better grades but not because of any causal influence of self–esteem. That is, having high self–esteem after our interventions predicted getting better grades on the exam, but this was due to having gotten better grades on the earlier exam.

DISCUSSION

The present study presented an unusual opportunity to test the academic impact of bolstering self–esteem or a sense of control in a field ex-

1. The interaction of sex with grade on Test 1, $F(1, 57) = 4.17$ $p < .05$, $0^2 = .07$, on this item indicated that men and women who had Cs on the first test reported nearly identical self–esteem; 4.08 and 4.07. But among students who received Ds and Fs on the first test, men reported much higher levels of self–esteem than women; 4.3 and 3.5, respectively.

periment design that included random assignment to conditions and actual grades. We unexpectedly discovered that bolstering self–esteem led to poorer performance, especially among the weaker (D and F) students. Students with low grades on the first examination who then received messages aimed at bolstering their self–esteem performed worse afterwards. The decline in performance was meaningful in absolute terms, going from borderline passing to a low F, and also in relative terms, being significantly worse than the no–message control group and the responsibility attribution group, both of which did not change. The C students who received the self–esteem bolstering messages likewise got worse, although C students in the other conditions also showed some decline. The attempt to increase students' feelings of responsibility and control over their outcomes also failed to help them improve their grades. Taylor and Brown (1988) suggested that a sense of control helps "make each individual's world a warmer and more active and beneficial place in which to live" (p. 205), but our participants, who were reminded to avoid externalizing the blame for their failures, did not improve their scores over time.

Why did these interventions fail? Looking first at self–esteem, we collected these data before the publication of Baumeister, Campbell, Krueger, and Vohs's (2003) and Valentine, DeBois, and Cooper's (2004) reviews of the self–esteem literature. Even though those reviews question the beneficial effects of raising self–esteem, the negative effects of bolstering self–esteem we report here are rare ones. Baumeister and his colleagues cautioned that boosting self–evaluation independent of actual performance might encourage people to adopt a cavalier, defensive attitude toward external demands and criteria. In the present context, it is conceivable that the messages aimed at bolstering self–esteem somehow convinced participants to think well of themselves regardless of their academic efforts and outcomes. Indeed, weak students may maintain self–esteem best by withdrawing effort and minimizing the degree to which their self–esteem is contingent on good grades (see Crocker & Park, 2004; Forsyth, 1986). In the present context, such withdrawal would most likely have had an adverse impact on studying and other forms of effort, possibly leading to the poor performance on the final exam.

Turning to a sense of control, recent reviews have raised questions about the value of unrealistically positive views of the self, including exaggerated feelings of control (Dunning et al., 2004). Even though a sense of control may provide a buffer against the motivational side–effects of helplessness, feelings of unrealistic optimism can lead to complacency rather than active coping. When the students were assured that they, themselves, controlled their outcomes, they may not engage in the types

of behaviors that would have improved their grades in the class, such as studying, attending lectures, and completing assignments. Even though prior studies using similar methods have successfully manipulated sense of control, the use of emailed messages may have been less effective in effecting a change in sense of control. Recent findings, too, suggest that a sense of controllability, independent of context or domain, may not facilitate achievement in a specific setting. Self–efficacy theory, for example, recommends using interventions that bolster confidence with regard to the specific intellectual skills and learning activities needed to perform well at the course's tasks instead of inducing a generalized sense of control (Lodewyk & Winne, 2005).

The present findings raise obstacles for further research. Self–esteem bolstering interventions are widespread in the United States, as we noted in the introduction, and for that reason deserve careful scrutiny. If they are causing students with low grades to do worse in school—as the present findings indicated, and that grade inflation could conceal in most school settings—then it seems imperative to conduct careful, rigorous tests. Longitudinal survey studies like those reviewed by Valentine et al. (2004) provide data on large samples of students in school settings, but random assignment to experimental conditions enables causal hypotheses to be tested reliably with substantially smaller samples. Given the pragmatic difficulties of withholding treatments from students who are thought likely to benefit from them, few such studies are done, and so the published literature is largely devoid of studies like the present one. Moreover, it may be unethical to conduct properly designed studies in which one treatment has a chance of causing students to get worse grades than they would otherwise. The present findings are particularly important to consider, given that we can not ethically justify replicating these findings without eliminating the now known risks to participants. We urge any other researchers with relevant data to come forward, for the research community should not quietly conclude that bolstering self–esteem harms performance while thousands of schools continue to bolster self–esteem in the misguided but unquestioned belief that it will improve performance.

Limitations of this study must be acknowledged. We studied a relatively small number of students (although the effect was sufficiently robust to reach significance). The self–esteem bolstering was well intentioned and resembles other interventions in content, but it is in principle conceivable that other interventions would have the desired (opposite) effect. Our self–esteem intervention was also designed to bolster both general and academic self–esteem, and so the findings do not inform multidimensional models of the self (e.g., Marsh & Craven, 1997). The use of email, too, may have also produced different effects from

face–to–face self–esteem bolstering. Generalizing across cultural and generational boundaries is hazardous. Twenge's (2006) cross–temporal meta–analyses have shown that the current generation of young adults, who comprised our sample, differs substantially and significantly from previous generations in several relevant respects. Most notably, they have higher self–esteem and lower beliefs in internal control. The present manipulations of self–esteem and responsibility attribution thus were delivered to members of a generation who are already relatively high on one dimension and low on the other.

Also, all members of this sample had just received a grade of C or below on the first test in an introductory psychology course. It is entirely possible that bolstering self–esteem among high–achieving students would be free of ill effects and might even be beneficial. Some researchers have speculated that boosting self–esteem in recognition of successful achievement may be an effective strategy to promote good performance and socially desirable outcomes (e.g., Baumeister et al., 2003). The present findings indicate merely that boosting self–esteem or encouraging feelings of controllability in the wake of poor performance can be costly and counterproductive.

The self–esteem movement that began in the 1970s appears to have succeeded, at least to the degree that it raised self–esteem scores across North America. A meta–analysis by Twenge and Campbell (2001) indicated that the median male college student around 1995 had higher self–esteem than 86% of his peers in 1968 had. Another meta–analysis by Haney and Durlak (1998) confirmed that the self–esteem boosting school programs do succeed, on average, at increasing scores on self–esteem measures. (Whether this reflects actual change in self–concept, or merely enhanced willingness to rate oneself positively on questionnaires, remains unclear, even in the national data.) Narcissism, meanwhile, may have increased even more than self–esteem (Twenge, 2006). Despite these well documented improvements in self–appraisal, SAT scores have gone down over the same period. That seemingly paradoxical pattern fits well with the present findings, which suggest that bolstering self–appraisals in the absence of objective or contingent success will make school performance worse rather than better.

In sum, we continue to believe that adequate self–esteem and a sense of control are hallmarks of good adjustment (see also, Taylor & Brown, 1988). The present findings suggest only that bolstering them directly, independent of actual performance, may be ineffective as a strategy for improving students' work (at least for students whose grades are already below average). Possibly self–esteem boosts can help learning by serving as a reward for good performance. Perhaps self–esteem boosts that stress hard work, strategizing, and persistence can enhance perfor-

mance without the accompanying pitfalls of self–praise unrelated to performance (Kamins & Dweck, 1999). But persuading students to think well of themselves despite having performed poorly on a first test seems, if anything, to make students do even worse.

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