Self-Esteem and Persistence in the Face of Failure

Adam Di Paula and Jennifer D. Campbell
University of British Columbia

In 2 studies, the authors examined self-esteem, persistence, and rumination in the face of failure. Study 1 manipulated degree of failure and availability of goal alternatives. When an alternative was available, high self-esteem (HSE) participants persisted more than low self-esteem (LSE) participants after a single failure, but less after repeated failure. When no alternative was available, no self-esteem differences in persistence emerged. LSE participants ruminated more than HSE participants. Study 2 examined persistence and rumination for 10 personal goals across an academic year. HSE participants were better calibrated (higher within-subject correlations between perceived progress and persistence across goals), had higher overall levels of persistence, higher grade point averages, and lower levels of rumination than LSE participants. Although traditional views that emphasize the tension of persistence of HSE individuals need revision, HSE people appear more effective in self-regulating goal-directed behavior. Nobody likes a quitter. Although most people can appreciate that there are times when a course of action should be terminated, quitting is generally viewed as an objectionable decision. According to conventional wisdom, “Quitters never win, and winners never quit” and “When the going gets tough, the tough get going.” Thus, if we want to be winners. “If at first you don’t succeed, try, try again.”

Theorists from diverse areas of psychology have echoed the importance of persistence by pointing it a central role in the maintenance of a psychologically healthy and productive life. In this regard, particular attention has been paid to the relation between self-esteem and persistence, where it is generally believed that one of the core characteristics of high self-esteem (HSE) individuals is their greater tendency to persist in the face of failure. Research on persistence is generally consistent with this notion. Several studies have found that HSE individuals are more persistent in the face of failure than low self-esteem (LSE) individuals (McFarlin, Baumeister, & Blascovich, 1984; Perez, 1973; Sharma & Sorman, 1977).

The conventional wisdom notwithstanding, blind persistence is not an ideal self-regulatory strategy; there is great value in knowing when to quit. Some studies have not found greater persistence among HSE people, but these “failures to replicate” suggest that HSE individuals may be better calibrated in that they make better use of situational cues informing them whether it is more prudent to persist or withdraw. For example, Janoff-Bulman and Brickman (1982) and McFarlin (1985) told some of their participants that some of the tasks that they would work on did not, in fact, have solutions. This information caused HSE participants to persist less, but did not affect the persistence of LSE participants. Similarly, Sandelands, Brockner, and Glynn (1988) advised participants that the nature of the task was such that persistence was either a wise strategy or a less prudent strategy. HSE people persisted more in the former condition than in the latter condition, whereas LSE people were relatively unaffected by the manipulation. Thus, these studies suggest that HSE people are more responsive than LSE people to situational cues regarding the wisdom of persistence, and when given advice or cues that persistence may not be a good strategy, HSE people will persist even less than LSE people.

However, McFarlin et al. (1984) directly told participants what to do when they encountered a difficult problem (i.e., quit or persist). In this case, LSE participants were more responsive to the instructions, whereas HSE participants were not. In reconciling this study with Janoff-Bulman and Brickman's (1982) and McFarlin's (1985). Sandelands et al. (1989) drew attention to some earlier research (e.g., Brockner & Elkind, 1985) suggesting that LSE and HSE individuals may be differentially influenced by task-relevant cues as a function of whether such cues elicit an individual's active role in determining a course of action. LSE individuals, lacking confidence in their decisions, are especially influenced by cues that directly prescribe a course of action, whereas HSE people are more responsive to information that solicits an active role in determining a performance strategy.

Taken together, prior studies suggest although LSE people may be more responsive to directions that simply tell them what to do, HSE people make better use of situational cues in deciding for themselves the appropriate course of action. They also suggest that HSE people appear, in general, to be better calibrated in their self-regulation of goal-directed behavior.

Although these experiments are interesting, it is rare (if ever) in the natural ecology that people are provided with the kinds of cues given in these studies. Indeed, persistence is such a ubiquitous phenomenon precisely because we are not told, for example, that some problems have no solution or that some tasks will be too difficult to achieve, or that persistence either is or is not a wise strategy for a particular task. Other limitations of the experimental research were noted by Bandura (1989): "Laboratory simulations may differ from actual conditions on several important dimen-
The endeavor usually involves only a brief effort, failure carries no costs, and no opportunities exist for alternative pursuits" (p. 43).

The Present Research

In this article, we attempt to remedy some of these deficiencies. First, as advocated by several prominent theorists (Bandura, 1989; Baumeister & Tice, 1985; Feather, 1989), we examine persistence in a context in which there is an alternative goal that can be pursued. In natural settings, people nearly always have some alternative available when they encounter goal failure. For example, if a mathematics student is failing in her math courses, she might change her major to anthropology. When there is only one goal to pursue, persistence at that goal is perceived to be a simple function of the perceived probability of attaining the goal. If the probability of attainment is high, persistence should continue; if it is low, persistence should cease. Because HSE individuals have relatively high expectations of success (Taylor & Brown, 1988) and high levels of self-efficacy (Bandura, 1982), they should persist more than LSE individuals when their only options are either to continue to work in the face of failure or quit entirely. They have little to gain by quitting because they cannot reengage their efforts toward another alternative.

Second, we vary the severity of the failure (whether it is an initial vs. a repeated failure). The degree of failure is a calibration cue that is usually present in natural settings (in contrast to, e.g., information that some problems have no solution). Whereas a reassessment of effort toward the failed goal is a reasonable response to an initial failure, repeated failure should be more likely to lead to disengagement and/or the redirection of effort toward other alternatives (Hyland, 1987; Kuhl, 1981; Wortman & Brehm, 1975).

Third, we examine simultaneously both behavioral and cognitive persistence. The persistence literature has focused on the behavioral aspects of persistence, neglecting the perseverating thoughts about a goal that may continue long after behavioral pursuit has ceased. Influential historical conceptualizations of persistence (Lewin, 1935; Zeigarnik, 1927/1938) have maintained that if goal-directed behavior ceases, a state of psychological tension persists, keeping the goal and goal-related thoughts activated in memory. Although there is an important body of contemporary research that focuses on cognitive persistence or ruminat (e.g., Martin & Tesser, 1989, 1996; Martin, Tesser, & McIntosh, 1993), the persistence and rumination literatures have proceeded quite independently of one another, and measures of both behavioral persistence and rumination have not typically been included in the same study.

Finally, we include a measure that assesses declines in task importance. Previous research has found that in response to failure, individuals often reduce the importance of the task (e.g., Harter, 1993) or reduce the relevance of the dimension that the task assesses (Tesser, 1988). Inclusion of this measure allows us to examine the relations between reductions in relevance, rumination, and behavioral persistence.

Hypotheses

Below, we review four key differences between HSE and LSE individuals that are relevant to anticipating their responses in the present research: (a) differences in the psychological outcomes that motivate HSE and LSE individuals, (b) differences in their attributions for failure, (c) differences in their ability to deactivate goal intentions, and (d) differences in the degree to which the importance of a goal is reduced following failure.

Outcomes That Motivate Goal-Directed Behavior

Baumeister and Tice (1985; Tice, 1993) suggested that an important difference between HSE and LSE individuals is the primary psychological outcomes that motivate their goal-directed behavior. HSE individuals are primarily motivated to achieve success (AS) or approach a positive outcome, whereas LSE individuals are primarily motivated to avoid failure (AF) or avoid a negative outcome. According to Baumeister and Tice, these divergent outcome motivations should lead to different goal pursuits preferences between HSE and LSE individuals.

Their motive to AS should lead HSE individuals to prefer to work under conditions in which it is possible for them to attain a high level of performance success. They should be less inclined to work under conditions where their efforts can, at best, only bring their performance up to a passable level (e.g., when they have experienced repeated failure at a task). LSE individuals, in contrast, should continue to work under these conditions. Their motive to AF should cause them to continue working at the task so that they can remedy their personal deficiencies at that task and avoid future poor performances. Consistent with this hypothesis, Baumeister and Tice (1985) found that HSE participants were less motivated to continue working on a task after they had failed than after they had succeeded. The opposite was true for LSE participants.

The work of Baumeister and Tice (1985) fits well with earlier work on the achievement motive. Feather (1961) directly examined the relation between persistence and the distinction between the AS and AF motives. He found that individuals for whom the AS motive was greater than the AF motive persisted less when the probability of success was low than when it was high. Participants for whom the AS motive was greater than the AS motive, in contrast, persisted more when the probability of success was low. Thus, participants whose primary motive was AS behaved like the HSE participants in the Baumeister and Tice (1995) study, whereas those whose primary motive was AF behaved like Baumeister and Tice's LSE participants.

The different motives underlying the goal-directed behavior of HSE and LSE individuals have clear implications for their decisions regarding persistence in the face of goal failure. HSE individuals should be more likely to reduce persistence at the failed goal when they have experienced repeated failure than a single, initial failure, and this should be especially likely when there is an alternative goal available where success might still be achieved. The behavioral persistence of LSE individuals, who want to remedy their deficiencies, should be less affected by the degree of failure and the presence of alternatives.

Attributions for Failure

The attributions individuals make for failure also influence their motivation to pursue alternatives. One dimension emphasized by several investigators is attributional globality—the extent to which
the cause of a failure is attributed to factors that affect not only the present task, but other tasks as well (e.g., Abramson, Seligman, & Teasdale, 1978; Seligman, 1975; Weiner, 1984). HSE and LSE individuals differ in their attributional tendencies along the globality dimension, with LSE individuals tending to attribute failure to more global factors (Campbell, Chew, & Scratchley, 1991; Cohen, van den Bout, van Vliet, & Kramer, 1989; Peterson, Schwartz, & Seligman, 1981).

The global nature of the attributions made by LSE individuals should reduce their motivation to pursue alternative goals because the factors that caused failure on the original task apply to the alternative task as well; thus an alternative task is likely to be perceived as only holding the prospect of continued failure. In contrast, the more specific nature of the attributions made by HSE individuals should not inhibit this pursuit because the specific causes of failure relevant to one goal are not likely to be relevant to the alternative. Thus, this line of research also anticipates that following failure (especially repeated failure), HSE participants will persist less than LSE in the presence of an alternative.

**Ability to Deactivate Goal Intentions**

Kuhl and his associates (e.g., Kuhl, 1981, 1994a; Kuhl & Beckmann, 1994; Kuhl & Weiss, 1994) have examined the ability to initiate and sustain changes in goal-directed behavior in the face of failure using an individual-difference construct termed action versus state orientation. In the face of repeated goal failure, “action-oriented” individuals deactivate thoughts related to the failed goal, which allows them to effectively implement alternative goals. “State-oriented” individuals continue to ruminate about the failed goal (focusing on the negative state of failure) while maintaining behaviorally passive. This continued rumination inhibits the implementation of alternative goals and also hinders attempts to effectively pursue the failed goal.

There is some evidence that HSE individuals may be more action-oriented in their response to repeated failure, whereas LSE individuals are more state-oriented. The most direct evidence comes from correlations between measures of trait self-esteem and Kuhl’s (1994a) dispositional measure of action versus state orientation—the Action Control Scale (ACS). The measure is bipolar, with higher scores indicating greater action orientation and lower scores indicating greater state orientation. Campbell and Di Paula (2001) found moderate correlations (e.g., r = .36, p < .01) between the Rosenberg Self-Esteem Inventory (Rosenberg, 1965) and the ACS, such that HSE individuals were more action oriented.

Less direct evidence comes from examining the association with depression, a state that is typically characterized by lower levels of self-esteem. Measures of depression also correlate with the ACS (Rhodes, Michas, & Schroff, 1989), and experimental findings indicate that depressed participants engage in elevated levels of state-oriented thought after failure relative to their nondepressed counterparts (Kammer, 1984). Other research indicates that depressed individuals respond to task interruption with increased state orientation, which impairs their ability to perform alternative tasks (Kuhl & Helle, 1986). The associations between the ACS, self-esteem, and depression anticipate that LSE individuals should generally engage in more ruminative persistence than HSE participants, regardless of the degree of failure or availability of alternatives. This expectation is bolstered by the fact that LSE and depressed people have also been shown to score higher on other dispositional measures of rumination (e.g., Nolen-Hoeckerman, McBride, & Larson, 1997; Trapnell & Campbell, 1999).

**Goal Importance in the Face of Failure**

We noted earlier that psychologically reducing the importance of the task is another potential response to failure (Harter, 1993; Tesser, 1988). This response has been found to be particularly true for HSE individuals (Strange & Patterson, 1974). It seems reasonable to assume that as an individual reduces the importance of a goal, he or she experiences a concomitant reduction in motivation to persist toward that goal. Although this tendency to decrease the importance of the task may not affect persistence strongly when there is no alternative task, it may lead HSE people to more readily pursue alternatives when they are available.

We report two studies testing the hypothesized relationships between self-esteem and persistence. In Study 1, we tested the hypotheses in the laboratory by manipulating the availability of an alternative goal and the degree of goal failure experienced by HSE and LSE participants. Study 2 was a correlational field study that examined self-esteem differences in persistence in a multigoal setting. Participants enumerated up to 10 goals at the beginning of an academic year and reported, 5 months later, on the perceived progress, behavioral pursuit, and rumination associated with each of these goals.

**Study 1**

**Method**

**Overview and Design**

Participants reported on self-esteem received either one or three instances of failure feedback. They were subsequently presented with the failed task under one of two instructional sets manipulating goal options: (a) they could only continue to work on the failed task, or (b) they could continue working on the failed task, but had the option, whenever they chose, to switch to another task that measured a different ability. The amount of time participants worked on the failed task constrained the measure of behavioral persistence. The study was a 2 (self-esteem: high, low) × 2 (type of failure: single, repeated) × 2 (goal option: no-alternative, alternative) factorial design.

**Participants**

Participants were 171 (100 women, 71 men) undergraduates at the University of British Columbia scoring in the upper third (HSE) or lower third (LSE) of a distribution (N = 486) of Rosenberg Self-Esteem Inventory (RSEI) scores (Rosenberg, 1965) collected through a take-home questionnaire packet completed at least 3 weeks prior to participation. Six participants were dropped for suspicion regarding the feedback and 5 were dropped for failing to follow instructions properly, leaving 160. The mean self-esteem score was 45.01 for HSE participants (N = 80) and 30.33 for LSE participants (N = 80). Participants ranged in age from 16 to 24 years (M = 18.3 years) and received extra course credit for participating.

**Procedure**

The experiment was presented as a study of the relation between cognitive skill and personality, with participation involving working on a
series of tasks and completing some brief questionnaires. Participants completed the state version of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The measure of negative affect (NA) served as a baseline measure of state NA to be compared with a second NA assessment made after participants received failure feedback. This comparison assessed the affective impact of the feedback. Participants were told that they would complete the affect measure at several points during the study with the rationale that affect must be monitored because it may affect performance.

The experimenter then introduced the target task, the Word Fragment Test (WFT)—a test measuring an ostensibly important cognitive skill called inferential agility. The experimenter stressed the importance of inferential agility by giving a brief description of the ability and its correlates:

Inferential agility involves the ability to draw accurate conclusions based on limited information, to quickly see the logical and practical implications in situations where the outcomes are uncertain...those who are high in inferential agility are excellent decision makers.

Participants were also informed of the possibility of later working on another task, the Remote Associates Test (RAT), an ostensibly measure of "creative integration." To ensure that participants viewed the RAT as a separate goal, measuring a different ability, it was contrasted with the abilities being assessed by the WFT:

the RAT obviously measures a very different ability than the WFT...Those who are high in creative integration are very effective at integrating diverse ideas and can easily see associations between seemingly different concepts.

Participants received two sample items (one easy, one difficult) from the WFT and the RAT. A relatively easy WFT item was R____R____R(RAINBOW) and a relatively difficult item was _N____L____R_E (UNIVERSE). For the RAT, a relatively easy item was car—swimming—cue (POOL) and a difficult item was horse—complex—sleep (DEEP). Each WFT consisted of six items, and to ensure feelings of goal failure, the actual WFT test consisted of two moderately difficult and four extremely difficult items, based on previous completion norms. Participants were then seated in front of a computer terminal that delivered further instructions.

A computer program informed participants they would now be taking the WFT, and again stressed the importance of the ability. Participants first indicated their performance expectations on a Likert scale anchored by 1 (poor) and 9 (excellent) and then indicated the number of WFT items (out of six) they believed they could solve correctly. These measures would be compared with participants' postfailure performance evaluations and their actual performance on the task as checks on the effectiveness of the failure induction. In addition, participants rated how important it was for them to have good inferential agility (the ability measured by the WFT) on a scale ranging from 1 (not at all) to 9 (extremely). This measure would be compared with a final measure of the importance of inferential agility to assess reductions in the importance of the task.

Participants were then informed that they would be working on either one-sixth WFT (single-failure condition) or three-sixth WFTs (repeated-failure condition). All participants then began work on the first WFT and were given 30 s to solve each of the six items. After each item, the computer informed participants if they had the correct answer. When participants' answers were incorrect or if they provided no answer within 30 s, the computer displayed the correct answer. After completing the WFT, the computer "scored" the test and administered failure feedback. Participants were informed that they performed in the bottom third of students taking the test at their university. Participants in the repeated-failure condition took two additional WFTs and received similar failure feedback (indicating again that they had scored in the bottom third) after each test. At this point, all participants then indicated their performance perceptions on the same scale used for indicating their performance expectations and completed the NA scale again.

Participants then engaged in a brief thought-listing task. They recorded, on a sheet provided by the experimenter, those thoughts that were most salient to them as they did the WFT. Participants in the repeated-failure condition recorded their most salient thoughts during their third attempt at the WFT. These thoughts were later coded for the presence of state-oriented rumination.

The computer then informed participants that, in order for the experimenter to collect the required data, they had to do at least one more sixth WFT. They were instructed that after they had completed this WFT, they could subsequently work on additional WFTs if they wished, but were not obligated to do so. Each subsequent WFT would be structured and administered in the same manner described above with the exception that they would not receive general feedback after each test. After each WFT, participants would be given the option to attempt another six-item WFT or to discontinue work on the WFT. They were told that they could browse through some magazines if they did not want to work on additional tasks. This instruction ensured that participants did not view the consequences of early termination as "failing and doing nothing." They were informed that for the next 25 min, the experimenter would be preparing materials for another project and that he would return to administer some final measures. They were also told that, if they decided to work on additional WFTs, they would receive additional general performance feedback at the conclusion of the study.

Participants were then assigned to one of two goal-option conditions. In the no-alternative condition, participants received no further instructions. In the alternative condition, participants were informed that they had the option of continuing to work on the WFT or of switching to the other test (the RAT) during the 25-min period. Participants were told that if they decided to switch to the RAT they could not switch back to the WFT. This instruction made behavioral persistence on the WFT in the no-alternative condition and alternative condition directly comparable, that is, in both conditions, stopping work on the WFT meant abandoning it entirely. Also, to enhance the belief that the two tasks represented two very distinct abilities (and therefore different goals), participants were told that if they decided to switch tasks they would receive separate feedback for each task at the end of the 25-min period. Behavioral persistence was operationalized as the number of minutes participants worked on the WFT (not including the one obligatory test).

1 At the end of the 25 min, participants indicated, on a scale anchored by 1 (poor) and 9 (excellent), the degree of progress they felt they had made on the WFT. This measure would be used to determine the extent to which participants' behavioral persistence was associated with perceived progress, an index of effective self-regulation (Carver & Scheier, 1990). Participants also rated their WFT performance and the importance of possessing good inferential agility.

Results

Self-Esteem Differences in Initial Affect and Expectations

It was expected that LSE participants would initially have higher levels of NA and have lower performance expectations than HSE participants. This was indeed the case. Through t-tests, it was revealed that, relative to HSE participants, LSE participants expe-

1 We had no interest in performance or persistence on the RAT task for those participants who had the option to switch and did so. However, we note that the RAT was structured like the WFT—six items with item-by-item feedback, but was less difficult than the WFT (four easy and two difficult items). After each RAT segment, participants could quit or begin another RAT test.
It was expected that LSE participants would exhibit more state-oriented rumination after failure than HSE participants. Because this measure was also taken prior to the presentation of the goal option manipulation, we analyzed it through a Self-Esteem × Type of Failure ANOVA. The analysis yielded the expected main effect of self-esteem: F(1, 156) = 6.08, p < .05, η² = .038. LSE participants included more references to negative states in their thought listings (M = 1.16, SD = 1.21) than HSE participants (M = .74, SD = .94). No other effects were significant.

The observed self-esteem difference in state-oriented rumination was not an artifact of the self-esteem differences in initial expectations and initial NA. Two Self-Esteem × Type of Failure analyses of covariance (ANCOVAs), using initial expectations and initial NA as the covariates, respectively, did not yield significant effects of the covariate, p > .25, and the self-esteem main effect remained significant (p < .05).

Behavioral Persistence on the WFT

Behavioral persistence on the WFT was first examined using the full model. A Self-Esteem × Type of Failure × Goal Option ANOVA (see Table 1 for cell means) revealed a main effect of goal option indicating that participants persisted far less in the alternative condition (M = 5.74, SD = 5.79) than in the non-alternative condition (M = 14.56, SD = 6.97), F(1, 152) = 78.49, p < .01, η² = .341. A main effect of type of failure also emerged, indicating that participants persisted less in the repeated-failure condition (M = 9.15, SD = 7.72) than in the single-failure condition (M = 11.14, SD = 7.73), F(1, 152) = 4.02, p < .05, η² = .026. We had anticipated that HSE participants would be especially likely to reduce persistence as a function of type of failure. This expectation was revealed in a Self-Esteem × Type of Failure interaction, F(1, 152) = 4.20, p < .05, η² = .027 (see Column 3 of Table 1 for means). Follow-up tests of the simple effects of type

<table>
<thead>
<tr>
<th>Goal option</th>
<th>No alternative</th>
<th>Alternative</th>
<th>Avg. across SE group</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>15.80</td>
<td>4.70</td>
<td>10.23</td>
</tr>
<tr>
<td>SD</td>
<td>7.06</td>
<td>5.65</td>
<td>8.45</td>
</tr>
<tr>
<td>HSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>15.31</td>
<td>8.86</td>
<td>12.04</td>
</tr>
<tr>
<td>SD</td>
<td>6.62</td>
<td>5.80</td>
<td>6.94</td>
</tr>
</tbody>
</table>

of failure within levels of self-esteem indicated that although LSE participants did not differ in their persistence across the single- and repeated-failure conditions ($F < 1$), HSE participants persisted less in the repeated-failure condition than in the single-failure condition, $F(1, 157) = 5.52, p < .05, \eta^2 = .034$. No other effects were significant.

Although the three-factor interaction was not significant, we did examine our more specific predictions. We expected that when participants could not pursue goal alternatives, HSE participants would persist more on the WFT than LSE participants after a single failure. This expectation was not realized: HSE and LSE participants showed virtually identical levels of persistence in the no-alternative, single-failure condition ($F < 1$). We also note here that although HSE participants did persist less than LSE participants in the no-alternative, repeated-failure condition, the difference was not reliable ($F < 1$).

Our most important prediction, however, was that when goal alternatives were available, self-esteem differences in persistence would depend critically on the degree of failure experienced—after a single failure, HSE participants would persist more than LSE participants; after repeated failure, HSE participants would persist less than LSE participants, and less than HSE participants who had experienced a single failure. LSE participants were expected not to differ in their persistence after a single or repeated failure. This prediction anticipates a Self-Esteem $\times$ Type of Failure interaction in the alternative condition. The interaction was significant, $F(1, 76) = 8.51, p < .01, \eta^2 = .101$, and the means conformed perfectly to our expectations (see Figure 1). Simple-effects tests of self-esteem within levels of type of failure indicated that HSE participants persisted more than LSE participants in the single-failure condition, $F(1, 77) = 5.59, p < .05, \eta^2 = .068$, and tended to persist less than LSE participants in the repeated-failure condition, although this latter effect was marginal, $F(1, 77) = 2.93, p = .09$. Furthermore, simple-effects tests of type of failure within levels of self-esteem indicated that HSE participants persisted more in the single-failure condition than in the repeated-failure condition, $F(1, 77) = 10.76, p < .01, \eta^2 = .132$, and that LSE participants did not differ in persistence as a function of type of failure ($F < 1$).

This latter result was not due to differential levels of performance on the WFT during the persistence trials. Participants' average performance on the WFTs during the persistence period was submitted to a Self-Esteem $\times$ Type of Failure ANOVA and yielded no significant effects ($F < 1$).

As noted earlier however, HSE participants did have higher initial performance expectations, felt less NA both initially and after they received the failure feedback, and exhibited lower levels of rumination than LSE participants. Because these differences may have accounted for the behavioral persistence effects that emerged in the alternative condition, four Self-Esteem $\times$ Type of Failure ANCOVAs were conducted, with initial expectations, initial NA, postfeedback NA, and rumination serving as the covariates, respectively. In no instance was the covariate significant ($F > .25$), and in all cases the Self-Esteem $\times$ Type of Failure interaction remained significant ($F < .01$). Thus, the Self-Esteem $\times$ Type of Failure differences in behavioral persistence observed in the alternative condition were not attributable to differential levels of performance, rumination, NA, or initial expectations.

To further examine participants' motivations under conditions in which they could switch to an alternative goal, a second analytic strategy was used. A dichotomous variable was constructed representing whether or not participants decided to try any additional WFTs beyond the one additional WFT they were required to complete. Participants who did not try any additional WFTs were obviously those participants most motivated to avoid the WFT.

In the single-failure condition, 40% of LSE participants chose not to work on any additional WFTs, whereas none of the HSE participants made this choice (see Figure 2). This difference, $\chi^2(1, N = 80) = 7.66, p < .01$, provides additional evidence that HSE participants were more motivated to work on the WFT than LSE participants after a single failure. In the repeated-failure condition, 20% of LSE participants chose not to work on any additional WFTs, whereas 45% of HSE participants made this choice (see Figure 2), a difference that attained marginal levels of significance, $\chi^2(1, N = 80) = 2.85, p = .09$. Thus, when the context contained an alternative goal, HSE participants abandoned the WFT less readily than LSE participants after a single failure, but more readily than LSE participants after repeated failure.

Changes in Goal Importance

We expected that HSE participants would reduce the importance of the ability measured by the WFT more than LSE participants, particularly after experiencing repeated failure. Degree-of-importance reduction was calculated by subtracting the initial WFT ability importance rating from the final WFT ability importance rating. Thus, more negative scores reflected greater reductions in importance. A Self-Esteem $\times$ Type of Failure $\times$ Goal Option ANOVA on these scores yielded the expected main effect of self-esteem, indicating that HSE participants reduced the importance of the ability ($M = -0.90, SD = 0.98$) more than LSE participants ($M = -0.53, SD = 1.26$), $F(1, 135) = 4.26, p < .05, \eta^2 = .03$. This main effect was also qualified by the anticipated Self-Esteem $\times$ Type of Failure interaction, $F(1, 135) = 6.75, p = .01, \eta^2 = .043$ (see Figure 3). Follow-up simple-effects tests of self-esteem within type of failure indicated that HSE and LSE participants showed comparable reductions in importance in the single-failure condition ($F < 1$), but that HSE reduced importance.
SELF-ESTEEM AND PERSISTENCE

Figure 2. Percentage of participants not working on any additional Word Fragment Test (WFT) s as a function of self-esteem and type of failure (alternative condition). The percentage of HSE participants in the single failure condition is zero. HSE = high self-esteem; LSE = low self-esteem.

more than LSE participants in the repeated-failure condition, \( F(1, 156) = 11.15, p < .01, \eta^2 = .067 \).

An examination of Figure 3, however, reveals that the form of the interaction did not exactly conform to predictions. It was expected that HSE participants would reduce importance more after repeated than single failure, whereas LSE participants would not differ in their degree of importance reduction across these conditions. However, the degree of importance reduction did not differ for HSE participants across the single- and repeated-failure conditions (\( p > .20 \)), whereas LSE participants reduced the importance of the ability less in the repeated-failure condition than in the single-failure condition, \( F(1, 156) = 6.20, p < .05, \eta^2 = .038 \). Thus, LSE participants displayed an interesting, potentially self-destructive tendency—they maintained the highest degree of subjective importance under conditions in which they received the most negative feedback.

To ascertain whether the interaction between self-esteem and type of failure on importance reduction could be accounted for by the self-esteem differences observed with respect to initial performance expectations, initial NA, postfeedback NA, and rumination, four Self-Esteem \( \times \) Type of Failure ANCOVAs were conducted with each of the above measures serving as the covariate, respectively. In only one instance was the covariate significant. Higher initial expectations were associated with higher levels of importance reduction, \( F(1, 150) = 5.33, p < .05, \eta^2 = .034 \). However, in all instances the Self-Esteem \( \times \) Type of Failure interaction remained significant (\( p < .01 \)). Thus, the self-esteem differences in reductions in goal importance were not attributable to differential levels of rumination, NA, or initial expectations.

Behavioral Persistence and Self-Regulation

A secondary aim of this study was to examine the extent to which the behavioral persistence of HSE and LSE participants was associated with a key index of self-regulation—perceived progress. Most, if not all, theories of self-regulation posit that perceived progress plays a critical role in regulating persistence toward goals (e.g., Carver & Scheier, 1990). The measure of perceived progress on the WFT was correlated with the behavioral persistence measure within each self-esteem group. Perceived progress was correlated with persistence for HSE participants, \( r(80) = .33, p < .01 \), but not for LSE participants, \( r(80) = .09, n.s. \). Thus, for HSE participants, lower perceptions of progress were associated with reduced behavioral persistence—just as self-regulation theories would predict. The persistence of LSE participants, however, appeared to be “unregulated” in that it bore no relation to the degree these participants felt they were making progress on the task.

Correlations Among the Dependent Measures

Our primary dependent measures were state-oriented rumination, behavioral persistence, and reductions in the importance of the task. Although each of these measures, for the most part, showed the anticipated self-esteem differences, when we correlated the three measures, they were virtually uncorrelated with one another (\( rs \) ranged from -.07 to .05). We also calculated the correlations separately within self-esteem, single- versus repeated-failure, and within alternative and no-alternative conditions with similar results. Thus, it appears that, at least during the short time span of the present experiment, state-oriented rumination (during the failure induction), persistence (following the failure induction), and reducing the importance of the task (taken after the persistence measure) were not systematically related to one another. In Study 2, these variables are examined over a longer time frame within the context of multiple goals—conditions that are more amenable to revealing potential dynamic associations among these measures.

Discussion

The primary aim of Study 1 was to assess self-esteem differences in persistence, but it also illustrated the overall impact of two important situational variables. First, in contrast to most lab studies, the natural ecology usually offers alternative goals and the presence of an alternative had a powerful effect on persistence behavior. The amount of time that participants persisted at a task on which they experienced failure was 2.5 times greater when they could not switch to an alternative then when they could switch.

Figure 3. Change in ability importance as a function of self-esteem and type of failure. HSE = high self-esteem; LSE = low self-esteem.
Second, participants persisted much less after experiencing repeated failure than a single failure. The degree of failure is a potentially important cue for calibrating persistence, and in contrast to the types of cues provided in earlier experiments, it is one that is routinely available in natural settings.

The results yielded partial support for the self-esteem hypotheses. Although the expected self-esteem differences were not obtained in the no-alternative condition, behavioral persistence in the alternative condition conformed very closely with expectations. When an alternative goal was present, HSE participants persisted more than LSE participants following a single instance of failure. However, under conditions of repeated failure, HSE participants spent less time on the task than LSE participants, and nearly half of the HSE participants (as compared with only 20% for LSE participants) made no additional attempts at the task when they had the option to pursue an alternative.

The results are consistent with the motivations theorized to underlie the persistence behavior of HSE and LSE individuals. We argued that their motivation to achieve successful outcomes would cause HSE individuals’ persistence to be strongly tied to the degree of failure they experienced, with repeated goal failure motivating them to seek success through an alternative. This was clearly demonstrated in the present study. HSE participants switched to the alternative more readily after repeated failure than after a single failure. We also argued that their motive to AF, combined with their tendency to attribute failure to more global factors, would distract LSE individuals from pursuing an alternative goal in the face of repeated failure. While LSE participants did not avoid the alternative in an absolute sense (all but two LSE participants eventually switched to the alternative when it was available), they were no quicker to switch to the alternative after repeated failure than after single failure. Indeed, it appears that LSE participants were generally more motivated to persist after repeated failure in that there was a tendency (averaged over the alternative and no-alternative conditions) for more LSE participants to choose to work on additional WFTs after repeated failure (80%) than after a single failure (60%).

Contrary to predictions, when there was no alternative goal, HSE participants did not behaviorally persist more than LSE participants after a single failure. We first note that other studies using a single-failure, no-alternative context have not consistently found that HSE individuals persist more than LSE individuals; that is, when other cues indicate that persistence may not be a good strategy, the standard effect is not replicated (Di Paula, 1993; McFarlin, 1985; Shrauger & Sorman, 1977). Whereas null results must always be interpreted cautiously, it is plausible that HSE participants failed to show higher levels of persistence in the present study because the single failure was indeed quite a miserable and convincing failure. In addition to the general feedback that they scored in the bottom third of the distribution, they were given item-by-item feedback with the correct answers indicated. On average, participants got only about one of six problems correct, and their performance did not get any better on the persistence trials. Thus, as they undertook the persistence trials, participants continued to experience strong failure, and HSE participants may have concluded that achieving a successful performance was highly unlikely to occur on this particular task.

HSE participants did show, as expected, less behavioral persistence than LSE participants in the no-alternative, repeated-failure condition, but the difference was not reliable. Nonetheless, they did differ in another important respect. After repeated failure (in both the alternative and no-alternative conditions), HSE participants reduced the importance of the WFT ability more than LSE participants. This effect highlights the importance of examining both behavioral and cognitive aspects of persistence motivation. In terms of overt behavior, the proclivity of HSE participants to persist less than LSE participants after repeated failure was only substantial in the presence of an alternative goal. However, despite showing relatively high levels of behavioral persistence in the absence of an alternative, they were clearly less psychologically committed to the task than LSE participants. Thus, the behavioral persistence of HSE participants in this condition appears to be more “detached.” When they have no alternative, reducing the relevance of the failed task may be a strategy that allows HSE people to maintain a positive self-evaluation and still engage in a task associated with failure (Tesser, 1988).

In contrast, LSE participants did not appear to detach themselves from the task after repeated failure. In fact, they identified more with the task after repeated failure than after a single failure. This may, paradoxically, reflect their motive to AF, in that repeated failure may render that task an even more important context in which to remedy their deficiencies. The outcome is also consistent with prior evidence that LSE is associated with continued goal identification despite repeated failure (e.g., Pyszczynski & Greenberg, 1987).

The hypothesis regarding self-esteem differences in rumination persisted was strongly supported. After receiving failure feedback (both single and repeated), LSE participants engaged in more state-oriented rumination than HSE participants. This finding is particularly impressive given the nature of the thought-listing measure used to assess state orientation—participants were explicitly asked to indicate the thoughts that were most prominent in their mind as they were doing the task. They were not prompted to focus on their feeling states, yet that is what LSE participants tended to focus on. Their thoughts were more infused with negative self-evaluative feelings (e.g., “I feel stupid”) as well as with more diffuse negative feelings (e.g., “I feel anxious”) than were those of HSE participants.

Another important finding to emerge in Study 1 concerned the relation between self-esteem and self-regulation. The behavioral persistence of HSE participants was associated positively with perceived progress, an association indicative of effective self-regulation. This was not the case for LSE participants. This latter finding lends support to the contention that LSE individuals (and other individuals who have low self-evaluations) are prone to maladaptive patterns of persistence (e.g., Pyszczynski & Greenberg, 1987). Persistence that is unassociated with any perception of progress toward a goal is not only unproductive (especially when other goals are available), but is also likely to engender NA and rumination cognitions.

Study 2

Study 1 provided evidence that the relation between self-esteem and behavioral persistence can be better understood by considering the performance history (single vs. repeated failure) and the structure of the goal environment (a single- vs. multiple-goal environment). To determine if the self-esteem effects regarding behavioral
persistence, perceived progress, rumination, and importance reduction would replicate in a different setting, a correlational field study was conducted.

The field study complemented and extended Study 1 in several ways. First, because the goals or tasks that participants pursued in Study 1 were chosen by the experimenter (not the participants), it is important to establish whether the same processes would occur with respect to personally important goals. Second, Study 1 provided participants with manipulated and consistently negative feedback. In the field study, feedback was not controlled and was free to vary as a function of participants' naturally occurring successes and failures. Third, the multiple-goal context that we have argued is critical to understanding persistence is not fully represented in Study 1. Individuals were presented with one goal alternative and given the option to pursue it. Most of the time, however, individuals have a number of alternatives, and they must decide which one to pursue. In the field study, persistence, perceived progress, rumination, and reduced importance were examined in a true multiple-goal context, and thus we focused on the relations among these variables within participants across goals (i.e., within-subject associations) rather than across participants within a single goal (the between-subjects associations in Study 1).

Under these conditions, a perception that there is a lack of progress toward a particular goal should be associated with lower levels of behavioral persistence for that goal, especially for HSE participants. Thus, it was predicted that the behavioral pursuit of specific goals would be more strongly mediated with perceptions of goal progress (i.e., higher within-subject correlations) among HSE participants than LSE participants. Also, on the basis of Study 1, we expected that LSE participants would engage in more rumination regarding their goals than HSE participants, and that this would be the case even when LSE and HSE participants were experiencing relatively equal degrees of perceived failure.

In Study 1, HSE participants showed greater reductions in importance than LSE participants for the WFT, an experimentally-chosen task on which participants received strong failure feedback. We did not anticipate any overall self-esteem differences in importance reduction in this study because these were participants' own goals and there was no failure induction. We also examined the within-subject correlations between behavioral pursuit and importance reduction and rumination. Although these variables were not correlated in Study 1, associations between them might emerge over the longer time frame of this study. Finally, we recorded students' grade point average (GPA). On the basis of previous research (e.g., Hansford & Hattie, 1982), we expected that LSE would be associated with poorer academic outcomes.

**Method**

**Overview**

Study 2 examined self-esteem differences in persistence and goal importance among University of British Columbia students over the course of an academic year. The study consisted of two parts. Initially, participants completed an average of 24 self-esteem (in September) and goal assessment (in October) measuring the goals they wanted to attain during the academic year and how important they viewed the attainment of each of these goals. Five months later (in March), degree of perceived progress, goal importance, behavioral pursuit, and rumination were assessed for each goal.

**Participants**

Participants were 83 (30 men, 53 women) first-year students in introductory psychology classes scoring in the upper (HSE) or lower (LSE) third of a distribution of RSEI scores (Rosenberg, 1965) collected through a take-home questionnaire packet completed at least 3 weeks prior to participation. The mean RSEI for LSE participants was 29.69, the mean RSEI for HSE participants was 43.85. Their ages ranged from 17 to 32 years, with a mean age of 18 years. Participants received extra course credit in exchange for participating.

**Procedure**

**Initial goal assessment.** The study was presented as a study examining how students adapt to the challenges and problems of university life. After giving informed consent and acknowledging that they would be available to take part in a second session 5 months after the initial session, participants completed a goal inventory eliciting the goals they wanted to attain over the course of the academic year. They listed five goals in each of two goal domains previously reported as being highly relevant to university students: academics and social life (Caruso & Langston, 1989). Instructors encouraged participants to list relatively concrete goals (e.g., "get an A in chemistry" rather than "get good grades"). It was important to elicit relatively concrete goals because participants subsequently rated the relative importance of these goals within the academic and social domains, respectively (see below). This relative importance task would be difficult if participants' goals within a domain were listed at different levels of abstraction because some concrete goals (e.g., "make friends with Kelly") would obviously be manifestations of some more abstract goals (e.g., socialize).

Participants then indicated how important it was for them to attain these academic and social goals. Degree of importance was assessed using a "pie" measure for both academic and social goals. The pie measure required participants to divide up a circle using the relevant goals as pieces of the pie, with each piece of pie reflecting how important it was for the participant to attain that goal. The angle of each slice was measured and served as the initial measure of goal importance. The pie procedure provides a measure of the relative importance of each goal within the domain. It has the advantage of allowing participants to rate goals as equally important (which a ranking procedure would not), but prevents them from rating all goals as equally important (as a ranking scale procedure would allow).

**Reassessment of goals.** Participants were telephoned 5 months after the initial session and asked to return to the laboratory to complete the second session of the study. Ninety-six percent of participants (n = 80) complied. They first completed the RSEI to determine whether they retained their self-esteem status. Participants were then presented with the academic and social goals that they had listed in the initial session, and were asked to complete again the pie measures of relative importance. They were instructed that, if a goal was no longer of any importance to them, they should not include it in their pie. The angle of each slice was measured and served as the final measure of goal importance (excluded goals received a score of zero).

Participants then evaluated each goal in terms of satisfaction with goal progress, rumination, and active pursuit. On a 9-point scale anchored by not at all and completely, participants rated the extent to which they were satisfied with their progress toward the goal. On 9-point scales anchored by not at all and extremely, participants rated the extent to which (if they had...
actively pursued the goal, (b) they were pursuing the goal presently, (c) they had experienced intrusive and unwanted thoughts (ruminating) regarding the goal, and (d) they were presently experiencing intrusive and unwanted thoughts regarding the goal.

Participants were then asked whether they achieved each of their goals. If they had not, they were asked whether they had completely abandoned the goal (i.e., it was no longer of importance). Finally, participants were asked to give consent for obtaining their GPA from the Registrar for the academic year. Eighty-six percent (α = .59) consented to this request.

Results

The results were very similar for academic and social goals. Therefore, to increase the reliability of the measures, analyses were collapsed across type of goal. In those instances where results did differ, they are reported separately for academic and social goals.

Self-Esteem Differences in Average Levels of the Measures

Before examining the within-subject correlations between pursuit and progress satisfaction, importance reduction, and rumination, we calculated the average levels of these variables (averaged across goals) and examined these averages as a function of self-esteem.

Behavioral pursuit. Participants rated both their current and past behavioral pursuit for each goal. Because these ratings were highly correlated (average r = .72), they were averaged to form a measure of behavioral pursuit for each goal (Mean α = .82).

Subsequently, an overall behavioral pursuit measure was calculated for each participant by averaging these measures across goals (α = .82). We expected that HSE participants would actively pursue their goals more than LSE participants, an expectation that was based on previous positive correlations between self-esteem and action orientation (vs. state orientation) and conscientiousness (Campbell & Di Paula, 2001). This was the case. A t test on the overall behavioral pursuit measure indicated that HSE participants engaged in more behavioral pursuit than LSE participants, t(68) = 4.13, p < .01, η² = .20 (see Table 2). Consistent with this difference, HSE participants also reported achieving more of their goals (M = 4.28, SD = 1.91) than did LSE participants (M = 3.31, SD = 1.69), t(70) = 2.36, p < .05, η² = .073. However, this was more true regarding social goals (HSE M = 2.39, SD = 1.05; LSE M = 1.92, SD = 0.94), t(70) = 2.01, p < .05, η² = .055, than academic goals (HSE M = 1.92, SD = 1.42; LSE M = 1.39, SD = 1.32), t(70) = 1.63, p > .10.

Progress satisfaction. An overall progress satisfaction measure was calculated by averaging the progress satisfaction ratings across goals (α = .71). Given that HSE participants behaviorally pursued their goals more than LSE participants, they were also expected to indicate greater satisfaction with their goal progress. A comparison between self-esteem groups on this measure yielded the expected difference, t(69) = 4.52, p < .01, η² = .228 (see Table 2).

Ruminating. The ratings of current and past goal rumination for each goal were also highly correlated (average r = .85), and were averaged to form a measure of rumination for each goal (Mean α = .92). An overall rumination measure was computed for each participant by averaging these measures across goals (α = .79). A t test on the overall rumination measure supported our prediction that LSE participants would engage in more rumination regarding their goals than HSE participants, t(68) = 4.01, p < .01, η² = .191 (see Table 2). These differential levels of rumination were not simply an artifact of the differential levels of behavioral pursuit exhibited, or the differential levels of progress satisfaction experienced by LSE and HSE participants. When behavioral pursuit and progress satisfaction were entered as covariates in the analysis, the self-esteem differences in rumination still obtained. F(1, 65) = 4.91, p < .05, η² = .070. Thus, even when they exhibited relatively equal levels of behavioral pursuit, and felt similarly dissatisfied with their progress (i.e., when they were experiencing relatively equal degrees of failure), LSE participants ruminated about their goals more than HSE participants.

Changes in goal importance. We did not anticipate any self-esteem differences in importance reduction in the context of this study. The measure we used to assess overall importance reduction was the number of goals participants had abandoned (i.e., reduced the importance of entirely) by the time of reassessment. A t test indicated no significant differences between self-esteem groups in the number of goals abandoned (HSE M = 0.97, SD = 1.21; LSE M = 1.39, SD = 1.65), t(70) = 1.56, p > .10.

GPA. A t test indicated that LSE participants had lower GPAs (M = 70.16%, SD = 6.26) than HSE participants (M = 74.62%, SD = 8.14), t(61) = 2.43, p < .05, η² = .088. The correlation between RSEI scores and GPA was .29 (p < .05).

Table 2

<table>
<thead>
<tr>
<th>Self-esteem</th>
<th>Behavioral pursuit</th>
<th>Progress satisfaction</th>
<th>Ruminative persistence</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSE</td>
<td>5.33</td>
<td>4.95</td>
<td>4.24</td>
</tr>
<tr>
<td>M</td>
<td>0.99</td>
<td>1.20</td>
<td>1.30</td>
</tr>
<tr>
<td>HSE</td>
<td>6.29</td>
<td>6.20</td>
<td>3.03</td>
</tr>
<tr>
<td>M</td>
<td>0.95</td>
<td>1.13</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Note: Cell means are based on N = 34–35 for low self-esteem (LSE) and N = 36 for high self-esteem (HSE).

Calibration Between Behavioral Pursuit and Progress Satisfaction

Our primary interest in Study 2 was calibration—the association between pursuit and perceived progress. Our most important prediction was that behavioral pursuit and progress satisfaction would be better calibrated for HSE participants than for LSE participants. That is, the association between behavioral pursuit and progress satisfaction should be stronger for HSE participants than for LSE participants. To examine this prediction, within-subject correlations were computed between behavioral pursuit and satisfaction.

3 Given the intuitive nature of the pie task, reductions/increases in importance averaged across goals must sum to zero; thus, this measure cannot be used to examine self-esteem differences in overall importance reduction.
with progress for those goals that remained unattained at the time of reassessment. The average number of goals on which the correlations were computed was 6.1. The average within-subject correlation was .50, \( t(60) = 8.89, p < .01 \). A \( t \) test on the \( z \)-transformed correlations revealed that the within-subject correlation between progress and pursuit was significantly higher for HSE participants (Mean \( r = .66, SD = .33 \)) than for LSE participants (Mean \( r = .40, SD = .33, t(59) = 3.05, p < .01 \), \( \eta^2 = .136 \)). Furthermore, a stronger association between satisfaction with progress and behavioral pursuit was associated with more positive overall perceptions of progress: The degree of calibration between pursuit and progress (the within-subject correlation across goals) was positively correlated with the overall level of progress participants reported attaining, \( r(59) = .27, p < .05 \).

**Within-Subject Associations Between Pursuit, Rumination, and Importance**

We expected that behavioral pursuit might also be associated with changes in goal importance and rumination. We calculated goal-importance-change scores for each goal by subtracting the degree of importance at initial assessment from the degree of importance at reassessment. More positive scores indicated increases in importance; more negative scores indicated decreases in importance. A within-subject correlation was computed between this change score and pursuit for those goals that remained unattained at the time of reassessment. The average within-subject correlation was .17, \( t(62) = 2.18, p < .04 \), indicating that higher levels of pursuit were associated with increases in importance (there were greater decreases in importance for those goals participants pursued less). This correlation was somewhat higher for HSE participants (average \( r = .23, SD = .51 \)) than for LSE participants (average \( r = .10, SD = .42 \)), but the difference was not reliable, \( t(61) = -1.31, p < .20 \). The average within-subject correlation between pursuit and rumination was only marginally significant (average \( r = .14, t(60) = 1.86, p < .07 \), and it yielded no self-esteem differences, \( t(59) < 1 \).

**Discussion**

Study 2 was designed to evaluate self-esteem differences in persistence in a very different setting and using a very different methodology than in Study 1. In Study 1, participants worked on experimentally provided tasks in a tightly controlled laboratory environment; in Study 2, participants worked on self-chosen goals in the natural ecology. Study 1 examined persistence and changes in goal importance in a single experimental session; Study 2 allowed persistence and changes in goal importance to unfold over a more extended time course. Despite these differences, Study 2 provided convergent support for our overall suggestion that individuals higher in self-esteem are more effective in their self-regulatory responses to goal pursuit.

HSE participants were more satisfied with their overall progress toward their goals, engaged in higher overall levels of behavioral pursuit, ruminated less, and, in the academic domain, achieved higher GPAs than did LSE participants. And, as in the Study 1 goal-alternative condition, HSE participants reduced behavioral persistence more than LSE participants as the conditions under which they were persisting became more threatening to the self. The more they became dissatisfied with their goal progress, the less they persisted. Thus, when the "going got tough," they didn't get going—they got out, and pursued goals for which their perceptions of progress were more favorable. This appeared to be an effective strategy. The degree of calibration between pursuit and progress was positively correlated with overall satisfaction with goal progress. The less participants persisted on goals with which they were dissatisfied with their progress, the more satisfaction they derived from their goal-directed efforts in general.

The results of Study 2 again supported the prediction regarding rumination. LSE participants engaged in more ruminative persistence than HSE participants, and they did so even at comparable levels of goal pursuit and goal progress. This finding highlights the importance of considering both the behavioral and cognitive aspects of persistence. Even when HSE and LSE participants engaged in the same levels of behavioral persistence, LSE participants engaged in more ruminative persistence than HSE participants. Examining only persistent behavior in such an instance would preclude the detection of the important difference in persistence occurring at the cognitive level. The self-esteem difference in ruminative persistence also suggests that it would be inaccurate to infer that LSE participants "gave up" on their goals more than HSE participants. LSE participants were still engaged, but the engagement took place more at the cognitive level than at the behavioral level. It should be made clear, however, that this outcome does not necessarily imply that LSE participants willfully and intentionally remained engaged. In fact, they may have wanted to disengage. We would expect that experiencing continual intrusive and unwanted thoughts about a goal would motivate an escape from the source of these painful thoughts.

**General Discussion**

**Self-Esteem and Persistence**

Although LSE participants consistently engaged in more cognitive persistence (rumination) than HSE participants, self-esteem differences in behavioral persistence only emerged in contexts where goal alternatives were present. Furthermore, the nature of these differences critically depended on the degree of failure experienced. The impact of goal alternatives and degree of failure has not been systematically examined in prior research. Thus, the most general contribution of the present studies is emphasizing that the relation between self-esteem and persistence can be better understood by considering the type of persistence, the nature of the goal environment, and the history of prior attempts at goal achievement. When all of these variables are taken into account, it appears that uniformly greater persistence on the part of HSE people is not the norm. Rather, it is the case that HSE people appear to make better use of cues and thus display more optimal strategies in deciding when to persist.

The self-esteem effects in the above studies were obtained under conditions that closely match the phenomenal experience of individuals as they persist in everyday life tasks. People persist (or not) without certain knowledge of whether their efforts will or will not bring them success. In contrast to this uncertainty, several previous studies have provided participants with information that some of the tasks that they will work on do not have solutions (e.g., Janoff-Bulman & Brickman, 1982; McFarlin, 1985) or that per-
sistance is or is not an optimal strategy for the task at hand (Sandelands et al., 1988). Under these conditions, HSE participants were found to be more responsive to the cues than LSE participants. Although theoretically interesting, these results are of limited practical value. Students arriving at university are not told that some degree programs are going to be impossible for them to complete; army recruits are not informed that some military ranks are unreachable for them.

The present studies call into question the conceptualization of HSE individuals as people who will tenaciously persist in the face of failure. HSE individuals may persist tenaciously, but apparently only under a narrow set of circumstances. When failure is repeated or progress is deficient and there are alternatives, HSE individuals are more likely to reduce behavioral persistence than LSE individuals. Moreover, their stronger use of self-regulatory strategies was beneficial; HSE participants (in Study 1) had higher overall levels of behavioral pursuit, greater satisfaction with their progress, achieved more of their goals, and had higher GPAs than did LSE participants.

These studies also suggest that the conceptualization of LSE individuals as motivationally deficient in the face of failure needs revision. Under conditions where alternative goal pursuit was not possible (Study 1, no-alternative condition), LSE participants behaviorally persisted nearly as much as HSE participants. However, the pattern of their persistence here showed a lack of effective self-regulation in that they tended to persist more in the face of repeated failure than a single failure. Thus, the problem may not be a motivational deficiency, but a problem with the effective regulation of motivation.

Further evidence for this notion comes from the findings concerning numinative persistence. LSE participants consistently engaged in more numinative persistence regarding their goals than HSE participants. This cognitive persistence reflects a continual motivational engagement with the goal that is the focus of numination. Although this form of motivation is not as intentional as the motivation that drives behavioral persistence, it probably has a directive influence. In that persevering thoughts disrupt the ability to engage in effective goal pursuit (cf. Kuhl, 1981). Thus, it does not appear that LSE people are more likely than HSE people to disengage from their goals in the face of failure. Although they may expend less effort than HSE participants in attempting to attain their goals, they remain engaged at the cognitive level in the form of aversive goal numinations.

**Self-Esteem and Goal Importance**

Across both studies, participants tended to reduce the importance of goals that they were failing to attain—an effect that has been obtained by other investigators (e.g., Tesser, 1988). However, the present results extend our understanding of this process by delineating the conditions in which self-esteem differences are most likely to occur.

In Study 1, HSE participants reduced the importance of the ability being measured more than LSE participants, but only after repeated failure. LSE participants reduced importance less after repeated failure than after a single failure—an effect that, paradoxically, may reflect their motive to AF. Even when they exhibited greater reductions in goal importance, however, HSE participants did not reduce behavioral persistence relative to their LSE counterparts when there was no alternative goal to pursue. They appear to have engaged in a kind of "detached" persistence. Although reducing the importance of the task is an effective strategy to protect self-esteem (and probably prevent the adverse effects of numination), this kind of persistence is likely to result in deteriorated performance over time.

This kind of deterioration is most likely to occur in the natural ecology within settings that only provide for the pursuit of a single goal. While we have emphasized the importance of goal alternatives in this research, there are settings where the only alternative to persistence is exiting the setting altogether. Two such settings can be the workplace and the classroom. Employers often assign tasks to employees without giving them any alternatives. Similarly, teachers may order students to work on certain tasks to the exclusion of others. While repeated failure in such circumstances may not lead to the cessation of behavioral effort, it could very well lead to detached effort and poor performance. This is certainly not the aim of employers or teachers who normally strive to create dedicated employees and active learners. They may unwittingly sabotage this aim, however, by not providing goal alternatives.

**Conclusions**

Taken as a whole, the results suggest that people who are higher in self-esteem engage in more effective self-regulatory strategies in that they are more responsive to the degree of failure (or amount of progress) and presence of alternatives, two cues that should be important in directing optimal levels of persistence. The studies also emphasize the dynamic nature of persistence processes. Persistence was not solely a function of processes directly associated with the object of persistence but also a function of processes that occurred with respect to other goals. Focusing on the interrelatedness of goal processes not only brings us back to our theoretical roots (e.g., Lewin, 1935), but is consistent with an emerging trend in psychology toward an appreciation of the dynamic nature of goal processes (e.g., Tesser, Martin, & Cornell, 1996).

**References**


Campbell, J. D., Chew, B., & Scratchley, L. S. (1991). Cognitive and...


Received September 20, 2001
Revision received March 6, 2002
Accepted March 6, 2002

---

**New Editors Appointed, 2004–2009**

The Publications and Communications Board of the American Psychological Association announces the appointment of five new editors for 6-year terms beginning in 2004.

As of January 1, 2003, manuscripts should be directed to the following individuals. Authors are strongly encouraged to submit manuscripts electronically as of January 1, 2003, through the journal’s Manuscript Submission Portal (see the Web site listed with each journal title).

- **For* Psychology and Aging*(http://www.apa.org/journals/pag.html), submit manuscripts to Rose T. Zacks, PhD, Department of Psychology, Michigan State University, East Lansing, MI 48824-1117.

- **For* Psychological Assessment*(http://www.apa.org/journals/pas.html), submit manuscripts to Milton E. Strauss, PhD, Department of Psychology, Case Western Reserve University, Cleveland, OH 44106-7123.

- **For* Journal of Family Psychology*(http://www.apa.org/journals/fam.html), submit manuscripts to Anne Kazak, PhD, ABPP, Oncology Psychosocial Research, The Children’s Hospital of Philadelphia, Room 1486 (Market Street), 34th and Civic Center Boulevard, Philadelphia, PA 19104. For overnight couriers: Room 1486, 3535 Market Street, Philadelphia, PA 19104.

- **For* Journal of Experimental Psychology: Animal Behavior Processes*(http://www.apa.org/journals/xan.html), submit manuscripts to Nicholas Mackintosh, Department of Experimental Psychology, University of Cambridge, Downing Street, Cambridge, CB2 3EB, United Kingdom.

- **For* Journal of Personality and Social Psychology: Personality Processes and Individual Differences section*(http://www.apa.org/journals/psp.html), submit manuscripts to Charles S. Carver, PhD, Department of Psychology, University of Miami, P.O. Box 248185, Coral Gables, FL 33124-2070.

Manuscript submission patterns make the precise date of completion of the 2003 volumes uncertain. Current editors Leah L. Light, PhD, Stephen N. Haynes, PhD, Ross D. Parke, PhD, Mark E. Bonton, PhD, and Ed Diener, PhD, respectively, will receive and consider manuscripts through December 31, 2002. Should 2003 volumes be completed before that date, manuscripts will be redirected to the new editors for consideration in 2004 volumes.