

Cultural variations in pre-emptive effort downplaying

Reinier P. Pualengco, Chi-yue Chiu and Young-Hoon Kim

Department of Psychology, University of Illinois, Urbana, Champaign, Illinois, USA

Pre-emptive effort downplaying (PED) occurs when people publicly downplay their effort expenditure on test preparation prior to taking a test for the sake of managing the social evaluation of the self in the face of a challenging performance task. Thirty Asian Americans and 29 European Americans had two opportunities to publicly report their effort expenditure on a practice exercise. They also completed measures of self-evaluations and concern for performance before working on the practice exercise, and the self-evaluation measure again at the completion of the actual test. Only European Americans showed PED. Additionally, concern for performance was positively associated with and mediated cultural variations in PED. The implications of these results are discussed.

Key words: achievement motivation, cultural difference, pre-emptive effort downplaying.

Introduction

Reinier, Mark and Allan are classmates in a social psychology class. Their professor announced that an extensive research project constituting 40% of their grade is due in 1 month. Reinier and Allan have been working late in the library for the past 3 weeks. Whenever they were researching, they always spotted Mark tucked in an obscure niche of the library busy working on drafts for the project, but Mark never noticed them. Three days before the due date, Reinier asked Mark how far he was in the project and Mark responded that he had yet to start reading articles for the assignment.

This scenario paints an everyday example of the phenomenon pre-emptive effort downplaying (PED). PED is a self-handicapping strategy (Berglas & Jones, 1978); People demonstrate PED when they publicly understate the effort they have expended on a task that has yet to be evaluated. Like many other self-handicapping strategies (Snyder & Smith, 1982), PED is a self-presentational strategy because individuals who demonstrate it, pre-emptive effort downplayers (PEDers), present an image to the public that is different from their private image. That is, PEDers labour diligently in private, but mask their actual work input in public. PEDers subscribe to the mantra that it is better to fail because one is lazy than because one is stupid (Jones, 1990) and want to obfuscate the relationship between ability and performance (Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000). We contend that PEDers use this strategy to avoid possible negative evaluations from others of the PEDers' abilities if they happen to perform unsuccessfully.

Defining features of PED

As mentioned, PED is a self-handicapping strategy (Berglas & Jones, 1978; Snyder & Smith, 1982). According to Snyder and Smith (1982), self-handicapping is 'a process wherein a person, in response to an anticipated loss of self-esteem from the possibility of inadequate performance in a domain where performance clearly implicates ability or competence, adopts characteristics or behaviours that superficially constitute admission of a problem, weakness, or deficit, but assist the individual in: (i) controlling attributions (made by oneself or others) concerning performance in order to discount the self-relevant implications of poor performance and augment the self-relevant implications of success; (ii) avoiding the threatening evaluative situation entirely; or (iii) maintaining existing environmental conditions that maximize positive self-relevant feedback and minimize negative self-relevant feedback'. (p. 107) Researchers have identified two categories of self-handicapping strategies: (i) behavioural self-handicapping; and (ii) claimed self-handicapping. Behavioural self-handicapping involves engagement in overt behaviours that would impede one's performance on the evaluated test. For example, self-handicappers may defend their self-esteem by withdrawing effort; they reduce effort investment so that they can protect their self-evaluation later by attributing their failure to a lack of effort (*vs* ability; Tice & Baumeister, 1990). Effort withdrawal can lead to a self-fulfilling prophecy because low effort expenditure could result in low performance. Claimed self-handicapping involves citing an impediment to performance (e.g. emotional distress, illness, fatigue or test anxiety) to justify an unfavourable forecast of one's performance on the evaluated test (Warner & Moore, 2004; Ferrari & Thompson, 2006). PED can be conceived of as a claimed self-handicapping strategy. Unlike behavioural self-handicappers, PEDers do not

Correspondence: Chi-yue Chiu, Department of Psychology, University of Illinois, 603 East Daniel Street, Champaign, IL 61820, USA. Email: cychiu@uiuc.edu

Received 22 May 2007; accepted 17 February 2008.

withdraw their effort in the face of a challenging task. Instead, because of their concern for performance, they may work harder than their peers to prepare for the task and choose to downplay their effort expenditure in the presence of an external audience. Like other claimed self-handicapping strategies, PED has a self-enhancement component as well as a self-effacement component. By publicly claiming a socially undesirable but less central characteristic (low effort expenditure), PEDers avoid negative social evaluations of the self on a highly self-relevant dimension (ability) if they perform poorly on the evaluated task (Snyder & Smith, 1982). Although this strategy seems to be widely practised, it has escaped empirical attention in the self-handicapping research literature.

The above characterization of PED highlights three aspects of it, which collectively define the construct: (i) self-presentational; (ii) pre-emptive; and (iii) driven by concern for performance. First, PED is characterized by a public pretence of effort avoidance; it serves as some sort of impression management. Because PED is self-presentational, in the current study, we measured PED by the extent to which participants downplayed their preparatory effort for an ability test when they reported it to two audiences (a peer and the experimenter).

Second, PED is pre-emptive and hence differs from many other self-evaluation management strategies. Many previously studied self-evaluation management strategies are cognitive strategies employed after the fact – people engage in them only upon receiving performance information. For example, in the self-serving bias (Blaine & Crocker, 1993), people make internal attribution for success and external attribution for failure. Similarly, upon receiving negative performance feedback, people may engage in downward social comparison; they manage self-esteem threat by comparing their performance to low performers (Gibbons & McCoy, 1991). In both instances, the self-evaluation management strategies are used after one has obtained feedback on their performance. In contrast, PED is a pre-emptive strategy; PEDers act to avoid what they foresee as a potential consequence of their poor performance on their self-evaluation. Even before the results on a task they complete are made known, PEDers already engage in PED to avoid possible negative social evaluation of the self.

In some respects, PEDers are similar to defensive pessimists (Norem & Cantor, 1986). Defensive pessimists anticipate that they may perform poorly in a task; nonetheless, they work hard on the task to maximize their chance of success. Like defensive pessimists, PEDers are motivated to be successful in their strivings. However, unlike defensive pessimists, who deflate their expectance of success and hold a relatively negative view of the self, PEDers seek to minimize the potentially damaging effects of possible failures on social evaluation of the self by downplaying their effort in their self-presentation.

PEDers may appear modest because they downplay their preparative effort publicly (Kurman & Sriram, 2002). However, whereas modesty is a self-presentation strategy that aims at diverting public gaze on one's competence, PED is a self-presentation strategy that aims at maintaining positive public evaluations of one's competence by lowering the social audience's expectation on one's performance.

Finally, individuals adopt PED to address their concern for performance. In the literature on student motivation, researchers have posited two primary goal orientations: task-focused and performance-focused (e.g. Grant & Dweck, 2001; Hong, 2001; Salili, Chiu & Lai, 2001). Task-oriented students concern themselves with the mastery of a task, an internal manifestation of their learning. In contrast, performance-oriented students concern themselves with more external expressions of their abilities such as grades and outperforming other students (Shi *et al.*, 2001). PED, like other claimed self-handicapping strategies (and many other self-presentational strategies), is particularly likely to occur among performance-oriented individuals. For instance, Snyder and Smith (1982) observed that students with an exaggerated investment in their intellectual competence are especially prone to self-handicapping in academic performance settings. In relation to this, Ferrari and Thompson (2006) have identified a set of motivational symptoms associated with claimed self-handicappers. Specifically, claimed self-handicappers often experience intense worry, self-doubt and anxiety when they are assigned to a challenging achievement task. These results suggest that PED may also be driven by a heightened concern for performance.

Despite that PED is a widely practised self-handicapping strategy, it has not been identified and studied in the self-evaluation maintenance literature. The current research represents the first attempt to identify PED and its motivational antecedents.

Cultural variations in PED

As PED has not yet been studied, it is first necessary to determine its existence. Therefore, a major goal of the current research was to show that PED exists. The second goal was to test for cultural differences in the demonstration of PED.

In the current study, we expect both European and Asian American participants to demonstrate PED. However, we also hypothesize that European American participants would exhibit PED more than do their Asian American counterparts. As mentioned, individuals who are concerned with performance are likely to practice PED, and there is evidence that European Americans are more concerned about their performance than are Asian Americans. For instance, European Canadians believe more strongly than

Asian Canadians in the fixedness (*vs* malleability) of ability (Heine *et al.*, 2001). When individuals believe that ability is fixed, they are motivated to document their level of ability through their performance (Chiu, Hong, & Dweck, 1994; Hong, Chiu & Dweck, 1995; Hong, Chiu, Dweck, Lin, & Wan 1999). They also tend to believe that ability and effort are inversely related – smart people do not need to work hard and people who need to work hard to perform well are not intelligent (Hong *et al.*, 1999; Hong, 2001). Thus, the stronger belief in the fixedness of ability may render European Americans more prone to practice PED. Consistent with this idea, there is evidence that in the face of initial failure on a challenging task, European Canadians tend to shift to a different task that will make them look good, whereas Asian Canadians tend to focus on improving their skills on the task (Heine *et al.*, 2001). It seems as though European Canadians are concerned about how well they perform on a task whereas Asian Canadians are not as concerned and view negative performance feedback as helpful in improving their abilities.

Based on these past findings, we predict that compared to Asian Americans, European Americans would be more concerned about their performance and more likely to practice PED. Furthermore, concern for performance is hypothesized to mediate the predicted cross-cultural difference in the likelihood of displaying PED.

Self-evaluations following PED

In the current study, we also explored whether practicing PED would enhance self-evaluation. Self-handicapping is a self-protective strategy that allows the individual to preserve a sense of self-esteem and competence in the face of possible failures (Snyder & Smith, 1982). In addition, publicly understating one's effort exertions on a performance task may enable PEDers to anticipate relatively favourable social evaluation of the self; if they succeed on the task with minimal effort, this outcome would be publicly seen as indicating superb intelligence. If they fail, the failure would not damage how others perceive their skills, because the failure would likely be attributed to the lack of effort.

In contrast, because practising PED also requires public acknowledgement of low preparatory effort, it may increase the PEDers' awareness of their negative social image (being lazy or low in conscientiousness), which may, in turn, dampen PEDers' self-evaluation following the display of PED. There is also evidence that claimed self-handicapping does not weaken the self-handicappers' self-doubt (Ferrari & Thompson, 2006). On the contrary, the tendency to practice claimed self-handicapping has been shown to be associated with lower efficiency in test preparation, more frequent rumination and the tendency to use maladaptive coping strategies (Warner & Moore, 2004).

Thus, it is also possible that PEDers would feel bad about themselves after downplaying their effort publicly. To explore the question of whether self-evaluation would increase or decrease following PED, in the current study, we monitored shifts in self-evaluations before and after engaging in PED.

Summary and study overview

In summary, PED is defined as the tendency to understate the amount of preparatory effort for a test to an external audience. The primary goals of the current study are to test whether PED exists and to compare the engagement in PED of Asian American and European American undergraduates. To achieve these goals, we recruited Asian American and European American students and had them try out some practice items in preparation for an evaluated test. Next, we asked them to report publicly the number of practice items they had attempted. To ascertain the role concern for performance played in PED, we measured it before the participants took the practice exercise. Additionally, we measured the participants' self-evaluation before they took the practice exercise and after they reported their effort.

Method

Overview

Four real participants of the same ethnicity and two confederates participated in each experimental session. At the beginning of the experiment, the experimenter explained that the study concerned effects of different test-taking conditions. Next, participants were told to take two tests, one in preparation for the next. To determine a change in self-evaluation over the course of the study, participants were asked to respond to a set of Anderson personality trait words (a measure of self-evaluation) before they took the practice test and after they finished the actual test. Before taking the practice test, participants were also administered a measure of concern for performance. Participants were given two opportunities to report their effort expenditure – once in front of their peers and once to the experimenter.

Participants

Fifty-nine undergraduate students (33 females and 26 males) at a Midwestern public university participated in the study. Of these, 29 were European Americans and 30 Asian Americans. The ages for the Asian American and European American participants were similar and ranged from 17 to 39 years, with a mean of 20.0 years.

Procedures

During each session, participants first completed a measure of concern for performance (Oleson *et al.*, 2000). They also responded to the first set of the Anderson (1968) personality trait words, which formed the baseline measure of self-evaluation. Next, the experimenter told the participants the cover story that the study concerned the effects of different test-taking conditions on performance. The participants were asked to take two 10-minute tests, with the first test being a practice test for the second, actual test. Both tests consisted of 10 SAT-Quantitative type questions. Participants were informed that performance on the practice test would not be evaluated. They were also told that the participant who received the highest score on the actual test would have his/her name announced to the group and receive a US\$10 cash reward. Participants were instructed that they could attempt as many or as few problems on the practice test as they wished.

After completing the practice test, the experimenter wrote down on a chalkboard in the experimental room a few 'feedback' questions. These questions included the number of problems attempted and the number of problems the participants thought they got correct. Other filler questions required the participants to indicate the perceived difficulty level of the test and to identify and briefly describe one challenging and one easy problem in the practice test.

Next, the experimenter announced that to ensure the anonymity of the participants' responses, he would leave the experimental room. The participants were also told that one volunteer would collect the responses from all other participants and transcribed the data to his/her handwriting. Thus, the participants were aware that they would report their responses to their peers.

To ensure that the participants' reports would not be influenced by their peers' responses when they reported their answers to the transcriber, the participants were asked to write down their answers to all questions on a piece of paper. Next, the experimenter left the room, and one volunteer (who was always a confederate) asked each participant to report individually the responses they had written down and transcribed the data to his/her handwriting. The number of attempted items reported to the confederate relative to the actual number of practice items attempted formed the measure of PED in the presence of peers (PED_{peers}).

After the transcription was completed, the participants proceeded to take the actual test individually in a sound-proof cubicle. They were reminded that the person who received the highest score on that test would have his/her name announced to the group and receive the US\$10 award.

At completion of the test, the experimenter entered each cubicle to collect the test individually. Before leaving each room, he conducted an interview with each participant and asked more 'feedback questions', including questions on

the perceived difficulty level of the actual test, the number of practice items attempted and the number of correct answers they expected to get on the practice test. The number of attempted items reported in the interview relative to the actual number of items attempted formed the PED measure in the presence of the experimenter (PED_{experimenter}). This measure allowed us to assess the generality of our results across two audiences (peers and the experimenter).

After the experimenter had conducted the interviews and collected all the test papers, the participants came out to the common area and responded to the second set of the Anderson personality trait words, which formed the post-PED measure of self-evaluation.

After they had completed the questionnaire, the experimenter probed the participants for suspicion. None of the participants identified the true purpose of the study. Finally, the experimenter debriefed the participants, explaining to them that: (i) the purpose of the study was to investigate PED; (ii) the tests were not graded; and (iii) there were two confederates in the study (including the one who volunteered to transcribe).

Measures

PED. PED was determined by comparing the actual number of practice items attempted by participants (the experimenter counted the number of problems in the practice test that the participants actually tried) to the reported number of practice problems attempted in the presence of their peers (PED_{peers}) and the experimenter (PED_{experimenter}).

Concern for performance. Participants completed a nine-item measure of concern for performance (Oleson *et al.*, 2000). They rated the degree of agreement they had with each item (1 = extremely disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = extremely agree). Some sample items were 'It is important that I succeed in all that I do', 'Failure has its advantages' (reverse scored) and 'Failure is unacceptable to me'. The internal reliability of the scale was 0.76. We took the average of nine items as an index of concern for performance, with higher numbers indicating greater concern for performance.

Change in self-evaluation. To measure change in self-evaluation within the 50-minute duration of the experiment, we created two equivalent checklists of 86 personality traits based on Anderson (1968)'s likeability ratings of 555 trait words. Anderson (1968) had 100 participants rate the likeability of an imaginary person on each of the 555 trait words on a seven-point scale (0 = least favourable and 6 = most favourable) and used the mean favourability rating to form the likeability value of each trait word.

Based on Anderson's likeability norm, we classified those adjectives with likeability rankings of 155 or above as positive adjectives, those with likeability rankings of 256 or below as negative adjectives, and those with likeability rankings between 156 and 255 as neutral fillers. The first list of adjectives consisted of 35 positive, 39 negative and 12 neutral adjectives. Participants were instructed to circle as many of the 86 adjectives on this list that 'described how they felt about themselves now' before they took the practice test. We counted the number of positive traits and the number of negative traits they ascribed to themselves. The internal reliability for both positive and negative adjectives was high (for the positive adjectives, $\alpha = 0.88$; for the negative adjectives, $\alpha = 0.78$). An equivalent list was formed by selecting adjectives that matched the adjectives on the first list on likeability rankings ($\alpha = 0.89$ for the positive adjectives and 0.79 for the negative adjectives). The participants responded to the second list after taking the actual test.

Results

Cultural differences in PED

Table 1 shows the mean number of items attempted and the mean number of items reported to have been attempted in the two ethnic groups. To examine whether Asian American and European American participants differed in the tendency to display PED, we computed the two PED indices by subtracting the actual number of practice problems attempted from the number of practice problems reported to have been attempted in the pertinent condition. These scores were reversed so that positive scores on these indices indicated understating of effort or higher PED. An Ethnicity \times Gender \times Audience (peer or experimenter, within-subjects factor) analysis of variance (ANOVA) revealed a significant main effect of ethnicity, $F_{1,55} = 8.66$, $p < 0.01$,

$\eta^2_p = 0.14$. No other effects were significant. Among the European American participants, PED was significantly different from zero, $M = 1.14$, $t_{28} = 2.16$, $p < 0.05$ in the peer condition, and $M = 1.24$, $t_{28} = 2.12$, $p < 0.05$ in the experimenter condition. In contrast, among the Asian American participants, PED was not significantly different from 0, mean PED = -0.67 , $t_{29} = -1.50$ (*ns*) in the peer condition and mean PED = -0.77 , $t_{29} = -1.40$ (*ns*) in the experimenter condition. These results disconfirmed the hypothesis that both European and Asian American participants would engage in PED, but are consistent with the idea that European Americans demonstrate it more than do Asian Americans.

Role of concern for performance

Because PED is performance-orientated, we predicted that participants who were highly concerned with their performance would demonstrate PED more than those who were low in concern for performance. As predicted, participants with higher concern for performance were more likely to engage in PED ($r_{\text{peer}} = 0.36$, $p < 0.01$ and $r_{\text{experimenter}} = 0.33$, $p < 0.05$).

Additionally, compared to the Asian American participants ($M = 3.36$), the European American participants had higher concern for performance ($M = 3.97$), $F_{1,57} = 18.02$, $p < 0.001$. These results are consistent with the hypothesis that concern for performance mediates the ethnicity effect on PED. To test this hypothesis, we took the average of the PED indices in the peer and experimenter condition, and regressed ethnicity on the aggregate PED index. The effect of ethnicity (with European Americans coded as 1 and Asian Americans as 0) on PED was reliable ($B = 0.60$), $t_{57} = 4.24$, $p < 0.001$. When PED was regressed on concern for performance, the effect of concern for performance was significant ($B = 1.55$), $t_{57} = 3.00$, $p < 0.01$. When PED was regressed on both concern for performance and ethnicity, the effect of

Table 1 Mean number of items attempted and reported to have been attempted among Asian and European Americans

| | Audience | | | |
|---|--------------------|-----------------|--------------------|-----------------|
| | Peer | | Experimenter | |
| | European Americans | Asian Americans | European Americans | Asian Americans |
| Mean actual number of practice test items attempted | 8.41 (2.15) | 6.47 (1.80) | 8.41 (2.15) | 6.47 (1.80) |
| Mean reported number of practice test items attempted | 7.28 (2.64) | 7.13 (2.33) | 7.17 (2.62) | 7.23 (2.56) |
| Mean estimated number of questions answered correctly | 5.17 (1.81) | 4.33 (2.40) | 4.93 (1.79) | 4.33 (2.07) |

Standard deviations are shown in parentheses.

ethnicity was no longer reliable ($B = 0.88$), $t_{56} = 1.20$, *ns*, but the effect of concern for performance remained significant ($B = 1.20$), $t_{56} = 2.04$, $p < 0.05$. Sobel's test results provided further support for the mediating role of concern for performance, Sobel's $z = 1.93$, $p = 0.05$.

Does PED lower self-evaluation?

A secondary research question of interest was whether the negative repercussions of displaying PED will temporarily lower PEDers' self-evaluations. Before answering this question, we examined the relationship between PED and baseline self-evaluations. First, there was no correlation between the attribution of positive and negative adjectives to the self ($r = 0.05$). Compared to the Asian American participants, the European American participants attributed more positive traits to the self ($M = 20.86$ vs 11.63), $F_{1,57} = 35.15$, $p < 0.001$. The two samples did not differ in the number of negative traits attributed to the self ($M = 5.72$ for the European American participants vs 3.90 for the Asian American participants), $F_{1,57} = 3.31$, *ns*.

Among European American participants, the tendency to engage in PED was negatively correlated with the number of self-ascribed positive traits at Time 1 ($r = -0.41$, $p < 0.05$, in the peer condition, and -0.37 , $p = 0.05$, in the experimenter condition). This result showed that the European American participants who reported fewer positive attributes had a greater tendency to understate in the self-report the number of practice problems they had actually attempted. Furthermore, European American participants who attributed fewer positive attributes to the self were also more concerned about performance ($r = -0.39$, $p < 0.05$; corresponding r was -0.19 for the Asian American participants, *ns*), which, as noted, predicted the tendency to engage in PED. In short, among European Americans, lack of positive self-perception predicted PED.¹ This result is consistent with the past finding that claimed self-handicappers tend to suffer from self-doubt (Ferrari & Thompson, 2006).

Next, we examined whether PED is associated with an unfavourable shift in self-evaluations. To answer this question we first carried out regression analyses on the number of positive adjectives participants used for self-description at the end of the experiment. We used PED and the number of positive adjectives participants used to describe themselves before taking the practice test as predictors. The results showed that positive self-description at Time 1 predicted the positive self-description at Time 2 ($B = 0.58$), $t_{56} = 7.17$, $p < 0.001$. Moreover, PED significantly predicted the positive self-evaluation at Time 2 after controlling for Time 1 positive evaluation ($B = -0.47$), $t_{56} = 2.02$, $p < 0.05$. Participants who engaged in more PED showed a greater reduction in the number of positive traits attributed to the self at Time 2.

The second regression analysis was carried out on self-ascribed negative traits at Time 2. The predictors were PED and the number of negative adjectives participants used to describe themselves at Time 1. The results indicated that Time 1 negative self-evaluation predicted Time 2 negative self-evaluation ($B = 0.54$), $t_{56} = 5.26$, $p < 0.001$. More importantly, after controlling for Time 1 negative self-evaluation, PED had a significant effect on Time 2 negative self-evaluation ($B = 0.44$), $t_{56} = 2.74$, $p < 0.01$. The tendency to engage in PED was associated with an increase in the number of negative traits attributed to the self at Time 2. In summary, the use of PED is associated with unfavourable shifts in self-evaluation (attribution of fewer positive and more negative traits to the self).

Discussion

The results showed that European Americans demonstrated PED by understating the number of practice problems they attempted as compared to the objective number of practice problems they attempted. In contrast, Asian American participants did not display a significant PED. It seems as though the phenomenon of PED occurs more in the European American culture than in the Asian American culture.

Our results also indicate that the ethnic group difference in PED may arise from cultural differences in concern for performance. In the current study, high concern for performance also predicted PED; participants who were highly concerned with their performance demonstrated PED more than did those who were low in this concern. In addition, concern for performance mediates cultural variations in PED. Thus, it seems that European Americans engaged in more PED than Asian Americans in the current study because they were more performance oriented. This result is also consistent with the previous finding that in the face of initial failure on a challenging task, European Canadians are more likely than Asian Canadians to shift to a different task that will make them look good (Heine *et al.*, 2001). This finding also suggests that the propensity of a person to engage in PED may be altered by changing his or her concern for performance. For example, it is possible for European Americans, although they tended to be PEDers in this research, to not understate the amount of problems they attempted when their concern for performance is lowered.

This cross-cultural variation in the tendency to engage in PED provides further evidence that PEDers are not simply being modest. In past studies, compared to their Western counterparts, Asians were more modest in self-presentation (Kurman & Sriram, 2002). However, in the present study, only European Americans displayed PED. Specifically, in a collectivist context where the individual is not expected to stand out, modesty is a strategy for managing one's social image by diverting attention away from their competence.

In contrast, in an individualist cultural context where being outstanding is an important measure of one's self-worth, individuals facing a challenging task may display PED to lower social expectation on their performance as a means of managing an impending threat to their self-image. That is, in this context, PED is a strategy used to ensure positive evaluation of the self in spite of poor task performance.

Because we used a quantitative test in the current study, it is possible that compared to European Americans, Asian Americans were more comfortable with their mathematical abilities, and felt less threatened by the test situation. Hence, they did not display PED in the current study. However, an Ethnicity \times Audience (peer or experimenter) ANOVA carried out on the number of items estimated to be answered correctly revealed no ethnicity differences, $F_{1,57} = 2.11$, *ns*, for the main effect of ethnicity, and $F_{1,57} = 0.40$, *ns*, for the interaction. Additionally, the ethnicity effects (main effect and interaction) in the Ethnicity \times Audience (peer or experimenter) ANOVA carried out on the perceived difficulty of the test were not significant, $F_{1,57} = 2.95$, *ns*, for the main effect, and $F_{1,57} = 0.01$ for the interaction.

In conclusion, the present study of PED has established a starting point upon which future research can build and expand our knowledge of PED. The findings of the present study are theoretically important for two reasons. First, PED is a new phenomenon that has not been identified before. Second, the data suggest that cultural differences in PED exist and are mediated by cultural differences in concern for performance. These findings point to several future research directions.

First, although our results are consistent with the idea that concern for performance mediates cultural variations in the likelihood of displaying PED, given that the salience of past failures and anticipation of future self-threat can elevate concern for performance (Taylor, Neter, & Wayment, 1995), future studies that manipulate concern for performance by making past failures or self-threats salient will further clarify the role of performance concern in PED and in its cross-cultural variations. Studies that directly manipulate the social desirability of PED as a self-presentation strategy will also illuminate its role in PED.

Second, we did not score the participants' actual performance in the practice test. It is possible that participants who downplayed their effort might also have underreported their actual performance (assuming that they had knowledge of their actual performance on the test). It is also unclear whether downplaying performance would serve a similar self-evaluation maintenance function as downplaying effort. PED allows individuals to maintain favourable social evaluation of the self by attributing their failure (if it occurs) to an unstable cause (effort). However, publicly understating one's performance would make others feel that one is not able even before one attempts the evaluated

test. Nonetheless, it is interesting to examine in future studies the differential psychological ramifications of downplaying effort versus performance.

In the current study, we construe PED as a self-presentation strategy. To determine the role of self-presentational concerns in PED, it will be useful to manipulate the anonymity and confidentiality of self-reported effort in future research.

Finally, we found that PEDers reported less favourable self-evaluation after underreporting their effort. This finding suggests that PED may not be an effective self-protective strategy. However, we did not manipulate PED in the current experiment. Thus, it would be premature to conclude that our results showed that PED lowers self-evaluation. To answer the question of whether PED is an effective strategy for protecting social evaluation of the self for low and high performers when the performance outcome is announced, future research to manipulate PED to establish its psychological ramifications should be carried out.

End note

1. Among Asian Americans, the tendency to engage in PED was not related to the number of self-ascribed positive traits at Time 1 ($r_{\text{peer}} = -0.13$, *ns*; $r_{\text{experimenter}} = -0.05$, *ns*). PED was not correlated with the number of negative traits ($r_{\text{peer}} = 0.12$ and $r_{\text{experimenter}} = 0.28$) among the European American participants and among Asian American participants ($r_{\text{peer}} = 0.07$ and $r_{\text{experimenter}} = 0.04$). The number of negative traits ascribed to the self was positively related to concern for performance among European Americans only ($r_{\text{European}} = 0.48$, $p < 0.01$; $r_{\text{Asians}} = -0.20$, *ns*).

Author note

The study reported in this article is based on the first author's undergraduate thesis under the direction of the second author. This research was awarded the Janet Tritsch Memorial Award from the University of Illinois at Urbana-Champaign.

References

- Anderson, N. H. (1968). Likableness ratings of 555 personality-trait words. *Journal of Personality and Social Psychology*, 9, 272–279.
- Berglas, S. & Jones, E. E. (1978). Drug choice as a self-handicapping strategy in response to noncontingent success. *Journal of Personality and Social Psychology*, 36, 405–417.
- Blaine, B. & Crocker, J. (1993). Self-esteem and self-serving biases in reactions to positive and negative events: An integrative review. In: R. Baumeister, ed. *Self-Esteem: The Puzzle of Low Self-Regard*, pp. 55–85. New York: Plenum Press.

- Chiu, C., Hong, Y. & Dweck, C. S. (1994). Toward an integrative model of personality and intelligence: A general framework and some preliminary steps. In: R. J. Sternberg & P. Ruzgis, eds. *Personality and Intelligence*, pp. 104–134. Cambridge: Cambridge University Press.
- Ferrari, J. R. & Thompson, T. (2006). Imposter fears: Links with self-presentational concerns and self-handicapping behaviours. *Personality and Individual Differences*, 40, 341–352.
- Gibbons, F. X. & McCoy, S. B. (1991). Self-esteem, similarity, and reactions to active versus passive downward comparison. *Journal of Personality and Social Psychology*, 60, 414–424.
- Grant, H. & Dweck, C. S. (2001). Cross-cultural response to failure: Considering outcome attributions with different goals. In: F. Salili, C. Y. Chiu & Y. Hong, eds. *Student Motivation: The Culture and Context of Learning*, pp. 203–219. New York: Kluwer Academic/Plenum Publishers.
- Heine, S. J., Kitayama, S., Lehman, D. R., *et al.* (2001). Divergent consequences of success and failure in Japan and North America: An investigation of self-improving motivations and malleable selves. *Journal of Personality and Social Psychology*, 81, 599–615.
- Hong, Y. (2001). Chinese students' and teachers' inferences of effort and ability. In: F. Salili, C. Y. Chiu & Y. Hong, eds. *Student Motivation: The Culture and Context of Learning*, pp. 105–120. New York: Kluwer Academic/Plenum Publishers.
- Hong, Y., Chiu, C. & Dweck, C. S. (1995). Implicit theories and self-confidence in achievement. In: M. Kernis, ed. *Efficacy, Agency and Self-esteem*, pp. 197–216. New York: Plenum.
- Hong, Y., Chiu, C., Dweck, C. S., Lin, D. M. & Wan, W. (1999). Implicit theories, attributions, and coping: Focusing on malleable intelligence motivates remedial action via effort attributions. *Journal of Personality and Social Psychology*, 77, 588–599.
- Jones, E. E. (1990). Foreword. In: R. L. Higgins, C. R. Snyder & S. Berglas, eds. *Self-handicapping: The Paradox That Isn't*. New York: Plenum Press.
- Kurman, J. & Sriram, N. (2002). Interrelations among vertical and horizontal collectivism, modesty, and self-enhancement. *Journal of Cross-Cultural Psychology*, 33, 71–86.
- Norem, J. K. & Cantor, N. (1986). Anticipatory and post hoc cushioning strategies: Optimism and defensive pessimism in 'risky' situations. *Cognitive Therapy and Research*, 10, 347–362.
- Oleson, K. C., Poehlmann, K. M., Yost, J. H., Lynch, M. E. & Arkin, R. M. (2000). Subjective overachievement: Individual differences in self-doubt and concern with performance. *Journal of Personality*, 68, 491–524.
- Salili, F., Chiu, C. Y. & Lai, S. (2001). The influence of culture and context on students' motivational orientation and performance. In: F. Salili, C. Y. Chiu & Y. Hong, eds. *Student Motivation: The Culture and Context of Learning*, pp. 221–247. New York: Kluwer Academic/Plenum Publishers.
- Shi, K., Wang, P., Wang, W., *et al.* (2001). Goals and motivation of Chinese students – testing the adaptive learning model. In: F. Salili, C. Y. Chiu & Y. Hong, eds. *Student Motivation: The Culture and Context of Learning*, pp. 249–270. New York: Kluwer Academic/Plenum Publishers.
- Snyder, C. R. & Smith, T. W. (1982). Symptoms as self-handicapping strategies: The virtues of old wine in a new bottle. In: G. Weary & H. L. Mirels, eds. *Integration of Clinical and Social Psychology*, pp. 104–127. New York: Oxford University Press.
- Taylor, S. E., Neter, E. & Wayment, H. A. (1995). Self-evaluation processes. *Personality and Social Psychology Bulletin*, 21, 1278–1287.
- Tice, D. M. & Baumeister, R. F. (1990). Self-esteem, self-handicapping, and self-presentation: The strategy of inadequate practice. *Journal of Personality*, 58, 443–464.
- Warner, S. & Moore, S. (2004). Excuses, excuses: Self-handicapping in an Australian adolescent sample. *Journal of Youth and Adolescence*, 33, 271–281.