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Unskilled-unaware and the role of defensive high self-esteem

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The purpose of this study is to examine the relationship between defensive high self-esteem and inability to recognize one's own incompetence. It is hypothesized that individuals displaying defensive high self-esteem will be most likely to show a high correlation between lack of skill and lack of awareness. Participants were assessed for defensive high self-esteem using the Marlowe-Crowne Social Desirability Scale and the Rosenberg Self-Esteem Scale. The unskilled-unaware construct was identified through comparison of prediction versus actual performance on a curriculum-scheduled exam. The null was rejected at \( p = .01 \), indicating the likelihood that defensive self-esteem can or does play a role in inability to recognize one's own incompetence.

We've all, at one time or another, shaken our heads and marveled at incompetence in action. How is it possible, we wonder, that she doesn't know she is making a fool of herself trying to sing when she is so obviously tone deaf? Why, we ask, does he think he even has a chance of getting into medical school when he can't pass algebra or chemistry? Sometimes we are dumbstruck by or embarrassed for the poor unwitting soul whose lack of skill is equaled only by a blissful ignorance of the deficiency.

In attempting to assess the possible causes of these deficits in critical self-appraisal, it seemed a reasonable inference that faulty perceptions of performance may be, in part, mediated by ignorance of the standards for competence and/or erroneous beliefs about one's own abilities. Additional conjecture regarding the possible flaws in an individual's metacognitive processes that would contribute to misattributions led to speculation about the role of such variables as self-protective mechanisms, performance heuristics, and personality traits, and their possible effect on an individual's ability to accurately evaluate both extrinsic and intrinsic cues. Accordingly, the current research was conducted in an attempt to examine the impact of defensiveness as a dimension of high self-esteem against invalid self-assessments of task competence. With regard to the invalid self-assessment variable, this study references current literature (Kruger & Dunning, 1999; Hodges, Regehr, & Martin, 2001; Dunning, Johnson, Ehrlinger, & Kruger, 2003) in using the unskilled-unaware model for measurement and discussion. Kruger and Dunning (1999) first studied the state of being both unskilled and unaware in research that assessed participants in three domains: humor (\( N = 65 \)), logical reasoning (\( N = 45 \)), and grammar (\( N = 84 \)). Measures for all three domains assessed perceived performance relative to peers. Additionally, logical reasoning and grammar assessments included estimates of task scores. Phase two of the grammar study measured bottom-quartile and top-quartile performers for their ability to
calibrate their assessments of their own performances through social comparison. The members in each group were asked to grade the tests of the members in the other group. Neither group was informed of its quartile ranking. The authors predicted that the bottom-quartile responders would lack the metacognitive skills necessary to both recognize competence in others, and to adjust their perceptions of their own performance relative to others.

In all three domains, participants were evaluated as “incompetent” in their task if their scores fell in the bottom quartile of the scores for each domain studied. Bottom quartile performers in all three groups (humor \( n = 16 \), logical reasoning \( n = 11 \) and grammar \( n = 17 \)) not only overestimated their abilities in relation to their peers, but also consistently ranked themselves well above the average in their performance estimates. Actual percentile rankings for humor (12th), logical reasoning (12th), and grammar (10th) are significantly lower than estimated by participants (58th, 68th, and 68th, respectively). Phase two results confirmed the inability of bottom-quartile performers to recognize their own incompetence through social comparison. Low performing participants were found to be less able to evaluate the competence of others, and were unable to alter their perceptions of their own performance after being given an opportunity to assess a superior performance.

In a 2001 study of resident-status family practice physicians, Hodges, Regehr, and Martin assessed the participants’ abilities to perform a task requiring interpersonal communication skills. The group \( N = 24 \) was divided evenly into tertiles based on individual scores for task performance. Residents whose scores fell into the bottom third for the group over-estimated their performance, corroborating the findings of Kruger and Dunning (1999). In addition, similar to the 1999 findings, participants in the top group were able to appropriately calibrate their assessments after being given an opportunity to compare their skills with a series of video demonstrations of skills performances ranging from “incompetence to advanced competence” (p. S87). Residents in the bottom tertile, however, showed an inconsistent pattern of calibration after viewing the videos. Corroborating findings in the 1999 study, bottom tertile performers as a group continued to overestimate their scores, though individually their assessments ranged from both decrease in performance estimates relative to actual scores to increase in performance estimates relative to actual scores. Other individual estimates in the bottom tertile group, post-calibration opportunity, yielded results ranging from calibration appropriate to the experts’ model, to no adjustment at all after comparison. These individual inconsistencies did not, however, dilute the finding that (as a group) physicians who are at greatest risk for incompetence also seem to possess the least amount of skill in recognizing and adequately adjusting for those deficiencies.

In an attempt to address the question of why those who are the most incompetent in a given skill set are also the least likely to recognize it, Dunning, Johnson, Ehrlinger, and Kruger (2003) assessed 141 undergraduate students for performance on a curriculum-scheduled exam. The researchers measured the students’ perceived performance and their perceived mastery of the course material against their actual exam scores. Consistent with earlier studies, those students whose scores placed them in the bottom quartile strongly overestimated both their performance and their perceived mastery of the course material. Percentile spread for the Dunning et al. (2003) study was similar to the Kruger and Dunning (1999) study: bottom quartile performers’ scores placed them in the 12th percentile, while their perceived mastery of the material and estimate of exam performance placed them in the 60th and 57th percentiles, respectively.

Citing this study and others (Ehrlinger & Dunning, 2003; Seymour, 1992; Eccles, 1987), Dunning et al. (2003) have hypothesized that preconceived beliefs about one’s skill leads to metacognitive error when processing information related to task performance. The researchers assert that this top-down approach to self-assessment and task performance increases the likelihood that individuals will make decisions based on their perceptions of their abilities rather than on their actual abilities. Given the real-world application of this metacognitive flaw (Hodges et al., 2001), the researchers have suggested follow-up studies in an effort to determine whether it is possible for the unskilled to develop awareness of their deficits to the degree that they are able to adjust their approach
to the situation or task. To that end, the authors have suggested that further research focus on the study of domains as they relate to this paradigm.

The current study examined self-esteem as a factor that may play a role in intrapersonal skills assessment and metacognition relating to task performance. In research on narcissism, Kernis (2001) reported findings from studies that examined unstable self-esteem (that which is “poorly anchored” and therefore easily influenced by extrinsic factors) and found that discrepant levels of explicit (conscious) and implicit (nonconscious) self-esteem contributed to overall self-esteem fragility. Incongruent levels of these dimensions (i.e., high explicit, negative implicit, low explicit, positive implicit) resulted in an increase in self-serving and self-protective responses over those responses resulting from individuals showing dimensional congruency. Kernis (2001) found that such fragile self-esteem is a “core component of narcissism” (p.223). The 2001 study also asserted (p.223) that for individuals with this type of fragile self-esteem, external factors (reward/punishment) and introjected factors (self/others approval) were more important motivators for self-regulatory behaviors than the identified factors (values congruency) and intrinsic factors (personal judgments) used by stable self-esteem cohorts.

In their comprehensive study of self-esteem, Baumeister, Campbell, Krueger, and Vohs (2003) cautioned against viewing this attribute as an objective reality rather than a subjective perspective. The researchers asserted that because self-esteem judgments are the result of a global evaluation of the self (p. 2), self-esteem reporting should be viewed as a perception rather than as a measurement of a discrete characteristic. In the 2003 study, the researchers noted that society’s view of high self-esteem as a panacea for social ills has contributed to erroneous generalizations. They argued that, because self-esteem scales do not measure self-awareness, they are neither an accurate measure of self-esteem nor a predictor of success. The authors suggested that self-esteem be measured across multiple instruments in order to more accurately identify dimensional variability (p.5).

Schneider and Turkat (1975) identified one such example of variability. The researchers noted that individuals displaying “defensive high self-esteem” (p. 133) differ from those who display “genuine high self-esteem” (p. 133) by their need to manage the impressions others hold of them. According to researchers (Schneider & Turkat, 1975; Baumeister et al., 2003), defensive high self-esteem is differentiated from genuine high self-esteem by a co-occurring need for approval that is marked by self-enhancement. The defensive dimension of high self-esteem can be identified using a dual-instrument approach that integrates measurements of self-esteem and socially desirable responding (Schneider & Turkat, 1975; Baumeister et al., 2003).

In an effort to explore domains that may play a role in the unskilled-unaware paradigm, the current study sought to address whether a relationship exists between self-esteem and inability to recognize one’s own incompetence. More precisely, the study focused on defensiveness as a dimension of high self-esteem a trait that may plausibly interfere with metacognitive assessment, and its role in the unskilled-unaware paradigm. It was hypothesized that in a comparison of self-esteem levels, individuals displaying defensive high self-esteem would be more likely to fit the unskilled-unaware paradigm than those who did not display defensive high self-esteem.

Method

Participants

100 graduate and undergraduate students at a small, private, co-educational, Midwestern university participated in this research study. Although a total of 141 participants completed the initial wave of the study, 41 were lost through attrition before completion of Wave 3.

Materials

The 12-item Short Form B (Reynolds, 1982) of the Marlow-Crowne Social Desirability Scale (see Appendix B) was chosen to measure students’ tendency toward socially desirable responding. Fit indexes for Reynolds’ Short Forms (1982) derived from confirmatory factor analyses (Loo and Thorpe, 2000) showed good fits for Forms A, B, and C, though internal-consistency reliability analyses showed no differences between means for any of the scales tested. Chi-square differences calculated by Loo and Thorpe (2000) indicated Forms A and B tend to be the best short form models of those tested. Form B was chosen for this study for its Cronbach’s alpha
score of .61 (a .02 improvement over the Form A score of .59).

The Rosenberg Self-Esteem Scale (Whiteside-Mansell & Corywn, 2003; see Appendix C) was chosen to measure students’ self-esteem which, when paired with scores measuring their tendency toward socially desirable responding, determined participant placement within the defensive self-esteem group.

Five additional self-report measures were used in this study. Three were related to a target exam score. Students predicted their exam score prior to the day of the exam (see Appendix D), as well as immediately following the exam (see Appendix E). Finally, upon learning their score, students reported their actual exam score (see Appendix F).

Several measures were used to allow students to evaluate their performance. First, a five-item Likert scale was used to measure students’ perception of their skill in assessing their own future and immediate performances (see Appendixes D and E). The scale ranged from “not at all accurate” at one, to “highly accurate” at five. Students also rated their satisfaction with their score as well as their satisfaction with their performance using five-item Likert scales (with “very dissatisfied” at one, “neither satisfied nor dissatisfied” at three and “very satisfied” at five; see Appendix F). Finally, students reviewed a 24-item Performance Influence Inventory and indicated which, if any, items may have influenced their performance on the target exam (see Appendix F).

Procedure
During the Spring 2004 semester, students were asked to complete a formal consent document and both the Short Form B of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982), and the Rosenberg Self-Esteem Scale (Whiteside-Mansell and Corywn, 2003). At that time, they were also asked to predict their performance on a target future class exam, and they used a five-item Likert scale to rate their skill at predicting their own future performance.

After completing the target exam, students immediately predicted their exam score, and once again rated the perceived accuracy of the prediction. Upon learning the results, students were asked to report their actual exam score, and to offer attributions for their results on a 24-item Performance Influence Inventory.

Results
The data from these tests were analyzed using chi-square. Consistent with Reynolds (1982), social desirability responding was evaluated as high if the participant achieved a score on the MCSDS of five points or higher. Consistent with Vispoel, Boo & Bleiler (2001), self-esteem was evaluated as high if the participant achieved a score on the RSES of 32 points or higher. Consistent with Schneider & Turkat (1975), defensive self-esteem subjects were identified as those who achieved high scores on both evaluations.

Based on consistency in identifying unskilled-unaware individuals using prediction of performance against actual performance (Kruger & Dunning, 1999; Hodges et al., 2001; Dunning et al., 2003), participants in this study were similarly assessed. Wave 2 score predictions were matched against the reported actual exam score. Scores were considered a match if they fell within the assigned 10-point range (i.e., 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 59-0 = F). Of the 100 participants assessed, 29 fit the criteria for the unskilled-unaware construct.

Consistent with analysis used by Schneider & Turkat (1975) for evaluating defensive high self-esteem data, defensive high self-esteem as a facet of unskilled-unaware was analyzed with chi-square. Results indicated that individuals who met the criteria for defensive high self-esteem (n = 38) were significantly more likely, ($X^2 = 9.2, df = 1, p < .01$), to overestimate their academic performance than those individuals who did not meet the criteria for defensive high self-esteem.

Further analysis of the data revealed additional significant correlations (Table 1). A significant correlation ($r = .217, p .01$) between social desirability responding and self-esteem indicated that as self-esteem rises, the tendency for individuals to respond in a socially desirable manner also increases. Year in college and self-esteem were significantly correlated ($r = .12, p .05$), and year in college and defensive high self-esteem were significantly correlated ($r = .189, p .05$), indicating that as individuals progress in college class, self-esteem – both with and without a tendency to respond in a socially desirable manner – increases.

Discussion

Conclusions
Supporting the arguments of Baumeister et al. (2003), results of this study challenge the broad (and popular) view of high self-esteem as a factor that ensures success. Analysis indicates that, when refined by a qualitative dimension (defensiveness), high self-esteem can, in fact, impair performance and achievement by retarding the ability to recognize deficits in skills and/or knowledge base.

Results of the current study showing a positive correlation between self-esteem and socially desirable responding may indicate that self-esteem reporting is influenced by the need to manage the impressions of others, supporting Baumeister et al. (2003). Additionally, because this correlation appears to dovetail with research that finds fragile self-esteem to be a core component of narcissism (Kernis, 2001), and given the fact that the correlation is a factor of significance in the current research on those who display a marked tendency to be unaware of their own incompetence, it might be reasonable to suggest that individuals identified as narcissistic may also fit the unskilled-unaware construct.

The positive correlation between year in college and self-esteem suggests that positive achievements (in this case, continuing success in college) may favorably impact an individual's global evaluation of him/herself, resulting in a heightened self-perception and correlating (reported) self-esteem. In addition, it may be inferred that for some individuals with unstable self-esteem who are positively affected by external events, achievement alone may subsequently improve their motivation and/or ability to self-regulate, leading to a greater likelihood of increased success, resulting in an enhanced self-perception.

A less intuitive correlation is that of year in college and defensive self-esteem. This correlation may indicate that as people achieve success (i.e., move into higher class status) and gain in self-esteem, they place increasing importance on their self-presentation. There is also the possibility that this statistic is indicating that individuals whose high self-esteem includes a defensive dimension are as likely to be successful as they are to fall prey to the unskilled-unaware syndrome. This correlation may also lend additional support to Kernis (2001), by suggesting that the need for self-enhancement in the face of implicit/explicit discrepancies is not diminished by success.

Finally, this study will make a contribution to the growing body of literature on the unskilled-unaware phenomenon and to the body of literature on self-regulation and self-esteem in general. Dunning et al. (2003) questioned why those individuals with the least skill are also the least likely to be aware of their deficiency. Findings from this research suggest that individuals possessing defensive high self-esteem may be hindered from objective self-assessment by their high need for approval, which results in deception of the self as well as deception of others.

Limitations

It should be noted that Baumeister et al. (2003) references a recent refinement to the measurement of defensive high self-esteem. Rather than measuring for social desirability responding (which corresponds to a deception of others as a facet of impression management), the authors, citing Paulhus (2002), suggest a shift to a scale that measures deception of self. Because the self-deception scale is relatively new and was unavailable, it was not used in the current study. However, it was determined that the MCSDS has a long history of reliability, and since it was used for the initial research into the defensive self-esteem construct (Schneider & Turkat, 1975) it would be preferable for providing this particular study with historical consistency.

An additional limitation involves participant integrity. Due to academic policies that prohibited researcher access to student exam scores, it was necessary to trust the accuracy with which students reported their actual exam scores. The irony, of course, is that enhanced self-presentation was a variable in the study, though not for this data set. Given the high statistical significance of the findings, however, it is clear that this possible confound had little or no effect on the results of this study. Finally, a typographical error ("unsatisfied" in place of "satisfied") on the first statement of the Rosenberg Self-Esteem Scale used in this study resulted in a discrepancy from the original version. Scoring reflected this error, and the accurate version of the scale is included as Appendix C.

Implications

Extensive research is needed to explore defensive high self-esteem as a unique trait...
(distinct from genuine high self-esteem, and differentiated from unstable self-esteem) in order to better understand its etiology, pathology, and stability. In addition, consistent with early studies (Kruger and Dunning, 1999; Hodges et al., 2001), future research into the unskilled-unaware construct with individuals possessing defensive high self-esteem should focus on whether subjects show responsiveness to calibration through both social comparison and task instruction. Finally, drawing on research that suggests fragile self-esteem to be a central component in narcissism (Kernis, 2001), future studies might examine the role of narcissism in the Unskilled-Unaware paradigm.

References
Appendix A

Table 1

Significant Self-Esteem Correlations

<table>
<thead>
<tr>
<th>Correlation</th>
<th>$r$</th>
<th>$Sig.$</th>
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</thead>
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<tr>
<td>Social desirability responding and self-esteem</td>
<td>.217</td>
<td>.01</td>
</tr>
<tr>
<td>Year in college and self-esteem</td>
<td>.212</td>
<td>.05</td>
</tr>
<tr>
<td>Year in college and defensive high self-esteem</td>
<td>.189</td>
<td>.05</td>
</tr>
</tbody>
</table>

Appendix B

The Marlowe-Crowne Social Desirability Scale, Short Form B

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally. Indicate your response by circling T for true or F for false.

T or F (1.) It is sometimes hard for me to go on with my work if I am not encouraged.

T or F (2.) I sometimes feel resentful when I don’t get my way.

T or F (3.) There have been times when I felt like rebelling against people in authority even though I knew they were right.

T or F (4.) No matter who I am talking to, I’m always a good listener.

T or F (5.) There have been occasions when I took advantage of someone.

T or F (6.) I’m always willing to admit it when I make a mistake.

T or F (7.) I sometimes try to get even rather than forgive and forget.

T or F (8.) I am always courteous, even to people who are disagreeable.

T or F (9.) I have never been irked when people expressed ideas very different from my own.

T or F (10.) There have been times when I was quite jealous of the good fortune of others.

T or F (11.) I am sometimes irritated by people who ask favors of me.

T or F (12.) I have never deliberately said something that hurt someone’s feelings.

Appendix C

The Rosenberg Self-Esteem Scale

Items 1 to 10 are statements about how you view yourself. This is not a test. There are no right or wrong answers. Read each statement carefully and circle the response that best describes you. Be sure to answer all items.

1. On the whole I am satisfied with myself.
   STRONGLY DISAGREE DISAGREE AGREE STRONGLY AGREE

2. At times I think I am no good at all.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

3. I feel that I have a number of good qualities.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

4. I am able to do things as well as most other people.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

5. I feel that I do not have much to be proud of.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

6. I certainly feel useless at times.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

7. I feel that I am a person of worth, at least on an equal plane with others.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

8. I wish I could have more respect for myself.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

9. All in all, I am inclined to feel that I am a failure.
   STRONGLY DISAGREE AGREE STRONGLY AGREE

10. I take a positive attitude with myself.
    STRONGLY DISAGREE AGREE STRONGLY AGREE

Appendix D

Score Prediction Prior to Exam

For the upcoming course exam:

Please predict how well you think you will perform on the exam by circling your estimated grade range.

A(90-100)  B(80-89)  C(70-79)  D(60-69)  F(59 or lower)

How accurate is your ability to predict your estimated grade range on the target exam?

Not at all accurate  2  3  4  5  Highly accurate

Appendix E

Score Prediction Immediately Following Exam

Please predict how well you think you performed on the exam you just finished by circling your estimated grade range.

A(90-100)  B(80-89)  C(70-79)  D(60-69)  F(59 or lower)

How accurate is your prediction?

Not at all accurate  2  3  4  5  Highly accurate
Appendix F

Score and Satisfaction Reporting

What score did you receive on the exam? 

How satisfied are you with your score on this exam?

| Very dissatisfied 1 | Somewhat dissatisfied 2 | Neither satisfied nor dissatisfied 3 | Somewhat satisfied 4 | Very satisfied 5 |

Without considering your score, how satisfied are you with your personal performance on this exam?

| Very dissatisfied 1 | Somewhat dissatisfied 2 | Neither satisfied nor dissatisfied 3 | Somewhat satisfied 4 | Very satisfied 5 |

Circle any and all of the following items that you believe impacted your performance on this exam:

<table>
<thead>
<tr>
<th>Personal difficulty with subject matter</th>
<th>Firm grasp of subject matter</th>
<th>Dislike of the class itself</th>
<th>Enjoyment of the class itself</th>
<th>Multiple exams taken during the week of the exam</th>
<th>No other exams to prepare for during the week of the exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough time spent on studying for the exam</td>
<td>Sufficient preparation time for the exam</td>
<td>Personal problems with family member, friend, or significant other/spouse</td>
<td>Satisfaction with personal relationships</td>
<td>Not enough sleep the night before the exam</td>
<td>Adequate rest the night before the exam</td>
</tr>
<tr>
<td>Paper or other assignment due the same day of the exam.</td>
<td>No assignments due the same day that would hinder attention to subject matter</td>
<td>Personality conflict with instructor</td>
<td>Personality compatibility with instructor</td>
<td>Material was not taught adequately</td>
<td>Material was taught adequately</td>
</tr>
<tr>
<td>Recently quit smoking</td>
<td>Recently began smoking</td>
<td>Recently quit exercising regularly</td>
<td>Recently began exercising regularly</td>
<td>Recently moved or began a new job</td>
<td>Living situation has remained relatively stable</td>
</tr>
</tbody>
</table>