DISCREPANCIES BETWEEN SELF- AND OTHER-ESTEEM AS CORRELATES OF AGGRESSION

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This research examines the opposing theories that high self-esteem is responsible for aggression and that low self-esteem is responsible for aggression. Our findings suggest that both theories may be correct. Targets' self-esteem and self-reported physical aggression were assessed; additionally, targets' roommates reported their esteem for the target. In support of both theories, self-esteem was related to aggression in a curvilinear fashion, such that very low and very high self-esteem people were more likely to report physical aggression than moderate self-esteem people. This phenomenon was partly qualified by interpersonal context; specifically, participants who thought more positively of themselves than their roommates thought of them as well as participants who thought less positively of themselves than their roommates thought of them reported higher levels of physical aggression. Those whose self-esteem they or their roommates' esteem of them did not report physical aggression. These findings inform psychological theories of aggression, especially regarding self-views and interpersonal reality.

Theoreticians, researchers, mental health professionals, physicians, and laypeople are united in their concern about aggression. The prevailing question involves locating the best predictors or underlying causes of

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aggressive tendencies, with the desire to understand what drives people to aggression. Here we investigate two seemingly competing hypotheses, each positing that people at different endpoints on the self-esteem continuum are prone to aggression. Moreover, we test the link between self-esteem and aggression from an interpersonal standpoint by examining the importance of others’ esteem of a target person.

LOW SELF-ESTEEM AND AGGRESSION
An immense literature suggests that low self-esteem is a source of aggression. Analyses of a variety of aggressive and violent acts have focused on perpetrators with low self-esteem. For example, low self-esteem is a common characteristic among violent youth gangs (Anderson, 1994), bullies (O’Moore & Kirkham, 2001), and late adolescents who perceive themselves as having aggressive tendencies (Gjerde, Block, & Block, 1988). A recent study of the personality characteristics of bullies (O’Moore & Kirkham, 2001) confirmed the finding that adolescents who bully have lower self-esteem than those who do not. Interestingly, the frequency with which the students reported bullying (i.e., not at all, occasionally, vs. frequently) was linearly, but inversely, related to their self-esteem scores, such that the “frequent bullies” reported the more negative self-views.

Different hypotheses exist as to why low self-esteem may be correlated with aggression. For instance, one theory suggests that low self-esteem may lead to violence because of limited sources of self-esteem available to the person; thus, low self-esteem people may turn to aggression as an alternative source (Papps & O’Carroll, 1998). A related view is that low self-esteem people actively dominate or aggress on others in an attempt to raise their self-esteem (Toch, 1993). Yet another theory of low self-esteem is that some people have violent tendencies and the combination of violent tendencies and low self-esteem may lead those individuals to aggress on relatively helpless victims (e.g., children, see Oates & Forrest, 1985; a physically weaker spouse, see Walker, 1979).

HIGH SELF-ESTEEM AND AGGRESSION
Recently, the hypothesis that low self-esteem is linked to aggression has been challenged by Baumeister and colleagues (Baumeister, Smart, & Boden, 1996; Baumeister, Bushman, & Campbell, 2000). According to Baumeister and colleagues, most researchers assume a correlation between self-esteem and aggression, but empirical evidence directly showing an association between low self-esteem and aggression is not as conclusive as has been claimed. Furthermore, Baumeister et al. (2000)
note that, in fact, low self-esteem is associated with risk-taking avoidance, self-protectiveness, and lack of confidence (see also Baumeister, Tice, & Hutton, 1989), all tendencies that run contrary to aggression.

Challenging the low self-esteem-aggression link, Baumeister et al. (1996) theorized that high self-esteem is a source of aggression. Baumeister et al.'s (1996) model asserts that an inflated self-concept, combined with a negative evaluation by others, leads to a discrepancy between internal and external appraisals. A state of "threatened egotism" ensues, which forces individuals to either: a) accept the negative appraisal and lower their self-concept, or b) reject the appraisal and maintain their positive self-concept. The first route would result in a less positive self-appraisal and perhaps the experience of negative emotions toward the self. The second route would not involve a change in self-appraisal, but instead would produce negative emotions toward the source of the threat, possibly leading to aggression or violence.

There is empirical evidence to support the hypothesis that high self-esteem leads to aggression. Researchers have found that high self-esteem is characterized by hostility and aggressiveness at times (see review by Baumeister et al., 1996), disregard for others (Colvin, Block, & Funder, 1995), a sense of entitlement (Bushman et al., 1999), and self-centered and egotistic attitudes (Exline, Bushman, Faber, & Phillips, 2000). A possible mechanism for these pernicious effects of high self-esteem is the moderate association between self-esteem and narcissism (e.g., Raskin, Novacek, & Hogan, 1991). Recent research suggests that narcissists show high levels of aggressive responding, particularly after they feel their sense of superiority has been questioned (Bushman & Baumeister, 1998). In addition, the expression and experience of anger among narcissistic individuals increases as their self-esteem increases (Pappas & O'Carroll, 1998). Thus, evidence also exists to suggest that high self-esteem is a correlate of aggression.

THE IMPORTANCE OF AN INTERPERSONAL APPROACH

The concept of aggression is often, but not always, interpersonal. The social and interpersonal nature of aggression highlights the importance of taking an interpersonal approach to understanding its predictors. Especially germane to the current study is the difference between a person's own self-esteem and others' esteem of the person. People who have higher self-esteem than others' esteem for them may be faced with the dilemma of threatened egotism. These people may turn to aggression in an attempt to maintain their positive self-views and reclaim their (self-perceived) high social status. Aggression is not necessarily predicted for those whose high self-esteem is affirmed by others (i.e., who
do not face threatened egotism). Importantly, according to the “threaten-
ened egotism” perspective, for the high self-esteem person, it is not suf-
icient that his/her own self-views are positive; what is needed, rather,
is that others agree with one’s own positive self-views.

By contrast, for people who have lower self-esteem than others’ es-
teeem for them, predictions are not as straightforward. As noted earlier,
several literatures link low self-esteem and aggression, but what of the
situation in which one’s self-views are negative but others view one pos-
itively? Here, a threat to self-concept exists as well (not “threatened ego-
tism” but “threatened low self-esteem”), and it is possible that self-consis-
tency motives may influence people to react to self-concept threats
with aggressive behavior, even if it is a positive threat to a negative
self-concept (cf. Swann, 1990). Alternatively, it may be that people who
maintain low self-esteem even in the face of positive views from others
have entrenched negative self-views. And, according to the literature on
low self-esteem and aggression, people with entrenched negative self-views
may be particularly likely to engage in aggressive behavior. Thus, the current analysis includes the interpersonal context by examin-
ing aggression in light of the match between self-esteem and others’
esteeem of the target person.

THE CURRENT STUDY

Given the state of the extant literature, we hypothesize that both ex-
tremes of self-esteem are correlates of aggression. Theorizing by
Baumeister and colleagues (e.g., Baumeister et al., 1996), as well as re-
search on the expression and experience of anger among narcissistic in-
dividuals with high self-esteem (Papp and O’Carroll, 1998), links aggres-
sion with high self-esteem. Conversely, research on low self-es-
teeem, bullies, and youth gangs links aggression with low self-esteem.
Therefore, in the present study, we test the hypothesis that there exists a
curvilinear relationship between aggression and self-esteem such that
those with low and high self-esteem would report more aggressive
behavior than those with more moderate self-esteem.

Furthermore, consistent with work on threatened egotism, we hy-
pothesized that the interpersonal context may qualify partly the relation
of self-esteem to aggressiveness. Specifically, we predicted that those
participants whose self-esteem outpaces others’ esteem of them would
report high levels of aggression, perhaps due to threatened egotism (cf.
Baumeister et al., 1996). We also predicted that participants who en-
dorsed lower levels of self-esteem than others endorsed of them also
would report relatively higher levels of aggression (perhaps because of
“threatened low self-esteem” or because of entrenched negative
self-views that contributed to aggressiveness). That is, we propose a curvilinear relationship between self—other discrepancies and self-reported physical aggression by the target, such that those with marked discrepancies—in either direction—will be most likely to report physical aggression.

METHOD

PARTICIPANTS

The sample consisted of 140 undergraduate university students (53 men and 87 women), who participated in the study to fulfill a requirement for their introductory psychology class. Each of the 140 students brought a same—sex roommate to the experimental session. The majority of participants were single (99%) and between 18 and 20 years old (86%). Ethnic breakdown was as follows: Caucasian (72%); Asian—American (11%); Hispanic (10%); and African—American (5%), 2% did not self-classify into these groups.

PROCEDURE

Participants were informed that they would be completing questionnaires about their personality, emotions, and self—concept. As a condition for inclusion in the study, participants agreed to bring a same—sex roommate to the experimental session. Approximately half of participants chose to live with the roommate they brought to the session, whereas the other half were assigned to their roommates by the university housing agency (such assignments are random except for matching students’ smoking status). It should be noted that no results were moderated by roommate choice versus assignment status.

Administration of the measures was conducted in groups of approximately 15 roommate pairs, with roommates seated apart from each other. After completing the questionnaires, participants were thanked and debriefed.

MEASURES

Self—Esteem and Discrepancy Between Self Versus Other Ratings. Because our interest was in self—esteem as well as the difference between self—and other—perceptions, we assessed participants’ self—esteem and roommates’ esteem for them using the following measures. Self—evaluations were assessed by the Rosenberg Self Esteem Questionnaire (SEQ; Rosenberg, 1965), a ten—item scale developed to measure global self—es-
Coefficient alpha in the present study was 0.90, consistent with past research (e.g., Joiner, Alfano, & Metalsky, 1993; Rosenberg, 1965). Each item was rated on a scale from one to five, with higher scores reflecting more self-esteem. Roommates' ratings of participants were assessed using the Revised Rosenberg Self-Esteem Questionnaire (R-SEQ; Swann, Wenzlaff, Krull, & Pelham, 1992). We refer to this construct as "roommate-esteem" for the remainder of the paper. This inventory includes the 10 items of Rosenberg's original self-esteem scale that have been worded such that each roommate reports the esteem he or she has for the target participant (e.g., "I see my roommate as a person of worth, at least on an equal basis with others"). The scoring scheme was similar to that for the original scale, such that item scores range from one to five, with higher scores reflecting higher esteem in which the roommate holds the target participant. Joiner, Metalsky, and colleagues (e.g., Joiner, Alfano, & Metalsky, 1992, 1993) and Swann et al. (1992) have reported acceptable reliability and construct validity for this scale. In a separate study of undergraduates and their roommates, Joiner (1994) found that roommate-esteem scores were significantly correlated with observer-raters' impressions of target students' likability ($r[38] = .39, p < .05$), even though observers' only exposure to target students was through observation of a 5-min interaction task. It thus appears that the roommate-esteem measure possesses adequate validity and, furthermore, may represent a reasonable proxy for others' general view of a target person.

The difference between self- and roommate-esteem was operationalized in two ways. First, a simple difference score was computed, with roommate-esteem scores subtracted from targets' self-esteem scores. Second, a residualizing regression approach was used, in which the variance associated with roommate-esteem scores was partialled from target participants' self-esteem and the resulting residual term was used as a type of discrepancy score (see John & Robins, 1994; Joiner, Katz, & Lew, 1999). Although it is acknowledged that difference scores may possess reliability problems (see Johns, 1981), we note that a) this issue is most problematic when components of the difference score are obtained from the same person (Johns, 1981), which is not the case in the current study, and b) other researchers have found similar self-other discrepancy scores to be appropriate for analyses similar to the current ones (see Colvin et al., 1995). Results were highly similar when difference or residualized scores were used; thus, only results using the latter are described in the remainder of the paper. Regarding the residualized score, we note that negative numbers indicate that the roommate's rating of the target participant was higher than the target's own self-esteem (i.e., target is relatively self-denigrating), whereas pos-
TABLE 1. Means and Standard Deviations of, and Intercorrelations Among, Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aggression</td>
<td>14.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8.06)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Self-Esteem</td>
<td>-0.43*</td>
<td>19.64</td>
<td></td>
<td></td>
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<tr>
<td>(7.19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Roommate Esteem</td>
<td>-0.43*</td>
<td>0.49**</td>
<td>18.87</td>
<td></td>
</tr>
<tr>
<td>(8.95)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Gender</td>
<td>-0.33*</td>
<td>-0.02</td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Note: N = 140. The mean and standard deviations for each measure are listed on the diagonal, with the correlations between measures listed under the diagonal. Aggression = Self-reported physical aggression as measured by the Physical Aggression Subscale of the Aggression Questionnaire (AQ: Buss & Perry, 1992). Self-Esteem = Participant's self-esteem as measured by the Rosenberg (1965) Self-Esteem Scale. Roommate Esteem = Roommate's esteem for target participant as measured by the Revised Rosenberg Self-Esteem Questionnaire (Swann et al., 1992). Gender = Gender of participants, where female is coded as 2 and male is coded as 1. *p < .05, **p < .01.

itive numbers indicate that the roommate's rating of the target participant was lower than the target's own self-rating (i.e., target is relatively self-enhancing).

Self-Reported Physical Aggression. Aggression was assessed by the Physical Aggression subscale of the Aggression Questionnaire (AQ: Buss & Perry, 1992). This subscale contains nine items rated on a Likert scale, with higher scores meaning a greater tendency toward physical aggression. A sample item from the subscale is: "Once in a while I can't control the urge to strike another person." Buss and Perry report satisfactory reliability and validity for the questionnaire as a whole and for the Physical Aggression subscale. In this sample, the reliability coefficient for the Physical Aggression subscale was .82.

RESULTS

Means, standard deviations, and correlations are reported in Table 1. There are several noteworthy aspects of Table 1. As can be seen, there was a significant correlation between target self-esteem and roommate-esteem, in a positive direction. Hence, the higher the participant's self-esteem, the higher the roommate's rating of the target. As seen in Table 1, participant's self-esteem scores and roommate-esteem scores correlate with self-reported aggression, such that lower self-esteem and more negative regard for the target by the roommate were associated...
with more aggressive tendencies on the part of the target. Gender did not correlate with any variables except physical aggression, with men reporting more physical aggression than women.

CURVILINEAR RELATIONSHIPS BETWEEN SELF-ESTEEM AND AGGRESSIVE BEHAVIOR AND BETWEEN DISCREPANCY SCORES AND AGGRESSIVE BEHAVIOR

Self-Esteem and Aggressive Behavior. A regression equation was constructed to test our prediction that high and low self-esteem would be more associated than more moderate self-esteem with self-reported physical aggression. Using self-reported aggressive tendencies as the dependent measure, we first forced the self-esteem score into the regression equation, followed by entry of the square of the self-esteem score. If the predicted curvilinear effect exists, the squared self-esteem score will emerge as a significant predictor of aggressive behavior (see Cohen & Cohen, 1983, pp. 224–229).

In support of our prediction, the results of this regression model showed that the squared self-esteem score was indeed a significant predictor of aggressive symptoms (partial correlation \( pr = .19, t (137) = 2.28, \ p < .05 \)). Gender did not moderate these effects. As can be deduced from the positive sign for the quadratic term’s partial correlation and Figure 1, the shape of the relationship was such that moderate self-esteem was associated with low self-reported physical aggression, whereas high and low self-esteem were related to higher aggressive symptoms.

Self-Other Esteem Discrepancies and Aggressive Behavior. We used a similar strategy to test our prediction that discrepancies in either direction would be associated with self-reported physical aggression. Using self-reported aggressive tendencies as the dependent measure, we first forced the residualized score into the regression equation, followed by entry of the square of the residualized score. Here again, if the predicted curvilinear effect exists, the squared residualized score will emerge as a significant predictor of aggressive symptoms.

In support of our prediction, the results of this regression model showed that the squared residualized score was indeed a significant predictor of aggressive symptoms \( (pr = .20, t (137) = 2.37, p < .05) \). Gender did not moderate these effects. Furthermore, as depicted in Figure 2 (and as can be deduced from the positive sign for the quadratic term’s partial correlation, \( pr \)), the shape of the relationship was such that low discrepancy (i.e., relative accuracy) was associated with low physical aggression, whereas high discrepancies in either direction were related to higher aggressive symptoms.
DISCUSSION

Our findings conformed to hypotheses both high and low self-esteem were associated with self-reported physical aggression. Importantly, had we only examined linear relations between self-esteem and self-reported aggression, we would have concluded that low self-esteem, not high self-esteem, is a key correlate of aggression. By contrast, our curvilinear analyses affirmed roles for both low and high self-esteem. We also found support for our hypothesis in self-other esteem discrepancies, in that undergraduate participants who reported self-esteem levels that were either more or less favorable than their roommates' report of the target's esteem endorsed more aggressive behaviors than participants who had little self-other esteem discrepancy. The lowest
aggressive tendencies were found among participants who saw themselves similarly to the way they were viewed by their roommates, regardless of self-esteem level.

Why would discrepancies in esteem relate to aggressive tendencies? Previous research suggests that there are problems one may encounter as the result of differences in self- versus other-views and, moreover, that the nature of the problems likely depends on the type of discrepancy.

Studies that assess correlates of self-other discrepancies have found that people who view themselves overly favorably may possess characteristics such as being guileful, deceitful, thin-skinned, distrusting of
others, as well as having a brittle ego-defense system (Colvin et al., 1995). A glimpse into the consequences of self-enhancement was provided by Paulhus (1998), who showed how interpersonal perceptions of self-enhancers deteriorate over time. Over the course of only 2.5 hrs of interaction, self-enhancers (people who rated themselves more favorably than they were seen by fellow group members) were viewed as overestimating their positive skills, hostile, defensive, and as braggadocios. Thus, research suggests that people with unrealistic positive self-esteem are likely to experience negative feedback in their interpersonal relationships and counter the negative feedback with aggression (Baumeister et al., 1996; Bushman & Baumeister, 1998). From Baumeister et al.’s (1996) perspective, aggression in this context is in the service of evading revision of a highly positive self-concept.

Self-denigrating discrepancies (i.e., the target’s self-esteem was more negative than the roommate’s esteem of him/her) also were related to more reports of aggressive behavior. The reasons for this require future research, and we have three speculations that may serve as useful heuristics for future work. First, from a self-verification perspective (e.g., Swann, 1990), threats to self-concept (even positive threats to a negative self-concept) are viewed as provocative and as engaging psychological and behavioral processes that maintain the self-concept’s status quo (even if negative). Aggression could be viewed as one such behavioral process.

A second possibility is that there is a particular quality to the self-concepts of those who maintain negative self-views in the face of more positive views from others (e.g., their self-concepts are more elaborated, autonomous, and entrenched). If so, and if low self-esteem in general is a source of aggression, it may be that those with particularly entrenched negative self-concepts are especially prone to aggressive behavior.

A third speculation involves the complex and dynamic interpersonal patterns that may emerge between those with low self-esteem and their relationship partners. Consistent with theorizing by Coyne (1976), research by Joiner and colleagues (e.g., Joiner, Alfano, & Metalsky, 1992, 1993) has shown that the combination of low self-esteem and excessive dependency (especially excessive reassurance-seeking) may produce complex interpersonal patterns. Initially, relationship partners of depressed, low self-esteem people attempt to meet dependency needs by providing positive feedback, which, in terms of the current study, would produce a self-other discrepancy (“threatened low self-esteem”). After such attempts repeatedly fail, however, relationship partners may become rejecting of depressed, low self-esteem people. Thus, negative self-views, in context of relatively positive views from others, may initi-
ate a destructive cycle of dependency and reassurance-seeking that eventually results in rejection from others. It may be that self-deprecators behave aggressively to counter any rejection-type feedback they receive or anticipate from others.

In contrast to those whose self-views diverge from interpersonal reality, people who are accurate about their strengths and weaknesses do not appear to be as vulnerable to aggression. Receiving interpersonal feedback consistent with one's self-view is likely to promote a sense of personal and interpersonal security (Swann, 1983). Further, a match between self- and other-views may facilitate better interpersonal relationships. For the target, there is no need to maintain excessively high or low self-esteem, while for the partner, there are no uncomfortable pressures to validate a different view of the target.

There are several limitations to this study that should be noted when considering our results and conclusions. First, it should be noted that target participants were each rated by only one person, their roommate. However, previous research by Joiner (1994) has found that roommate ratings converge with anonymous judges' ratings—a finding that somewhat offsets this limitation. Although we acknowledge this limitation, we note that it is difficult to conceive that any particular measurement approach would favor one outcome over another. Second, we recognize that our study centered on self-reported overt physical aggression. Third, there could be a possible alternative explanation to our findings. Rather than self-roommate discrepancies in self-esteem, our findings may potentially reflect discrepancies between expectations and actual interpersonal experiences. Further research should investigate how influential discrepancies are between expectations and actual experience on aggression. In addition, there are other correlates to self-esteem that may have an impact on the role of self-esteem and aggression. For example, anxiety or social skill levels of the target might impact the roommate's esteem of the target. Finally, our results would have been enhanced if we had obtained direct measures of behavioral tendencies or perhaps others' views of targets' aggressiveness. Despite these limitations, our results provide some evidence that both ends of the self-esteem continuum, as well as self-other discrepancies, are meaningfully related to aggressive tendencies.

Throughout the paper, we have framed the relationship between self-esteem, self-other discrepancies, and aggression as being one of self-esteem/discrepancies leading to aggressive tendencies. However, it is conceivable that engaging in aggressive acts influences both self- and other-perceptions. It may be that responding to interpersonal problems with aggression changes one's self-view and/or the way in which the person is viewed by others.
SELF-ESTEEM AND AGGRESSION

In summary, we hypothesized that participants at either end of the self-esteem continuum might report more aggression than those with moderate self-esteem, and results conformed to this prediction. Further, the results of this study showed that discrepancies in the way that a person views him-or herself relative to the way that others view the person are related to endorsement of physical aggression behaviors. Importantly, both extremes—seeing oneself more favorably and also less favorably than do others—were related to reports of aggressive tendencies. We suggest that self-other discrepancies engender interpersonal difficulties that, in turn, may prompt the use of physical aggression. The use of physical aggression is personally and interpersonally damaging, and it also may render self-views versus other-views of the target still more dissimilar, perhaps leading to a vicious cycle both within and across relationships. These findings inform social psychological theories of aggression, especially regarding cases in which self-views diverge from interpersonal reality.

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