

Pathological Personality Traits and Self-Esteem Reactivity to  
Daily Perceptions of Status and Inclusion

Brianna Jaczynski

Oakland University

### **Abstract**

This study examined the connections that pathological personality traits have with self-esteem reactivity. This was accomplished by asking 651 participants to complete measures of pathological personality traits as well as daily diary measures concerning their state self-esteem and daily perceptions of status and affiliation. Multilevel analyses focused on three types of associations: 1) the associations that daily perceptions of status and inclusion had with state self-esteem, 2) the associations that pathological personality traits had with the average daily perceptions of status and inclusion and the average daily level of state self-esteem, and 3) pathological personality traits as moderators of the associations that daily perceptions of status and inclusion had with state self-esteem. The results revealed that daily perceptions of status and inclusion were positively associated with state self-esteem. In addition, various pathological personality traits were associated with average daily levels of perceived status, perceived inclusion, and state self-esteem. Further, negative affectivity and detachment both moderated the associations that daily perceptions of perceived status had with state self-esteem.

## **Pathological Personality Traits and Self-Esteem Reactivity to Daily Perceptions of Status and Inclusion**

Personality refers to individual differences in how people think, feel, and behave (e.g., Mischel, 1968). Personality disorders arise when individuals exhibit personality patterns that markedly deviate from what can be expected for the average person (e.g., Wright & Krueger, in press). A variety of potential causes for personality disorders have been considered with some recent studies suggesting relationships between certain personality disorders and genetic factors (e.g., a mutation in the gene that encodes a serotonin transporter has been found to contribute to obsessive-compulsive disorder; Ozaki et al., 2003). It is also possible that personality disorders may be caused by factors such as childhood trauma, ongoing verbal abuse, and influences from peers. The *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*; American Psychiatric Association, 2013) updates the previous standards and diagnostic criteria that were included in previous editions of the DSM (e.g., *DSM-IV-TR*; American Psychiatric Association, 2000). The *DSM-5* provides the primary diagnostic model and it is beginning to shift toward a more realistic spectrum-like approach to personality disorder than in previous editions. A broad five-factor model of pathological personality traits as well as a model concerning levels of personality functioning were added to the *DSM-5* along with new diagnostic tools (e.g., the Personality Inventory for *DSM-5* [PID-5]; Krueger et al., 2012). These new methods and diagnostic tools have provided mental health professionals with improved strategies for conceptualizing and measuring pathological personality traits.

The pathological personality traits added to the *DSM-5* – which are often referred to as the “*DSM-5* Trait Model” (see Wright & Krueger, in press, for a review) – include: *negative affectivity* (i.e., the tendency to experience an array of negative emotions),

*detachment* (i.e., characterized by introversion, social isolation, and anhedonia), *antagonism* (i.e., aggressive tendencies accompanied by assertions of dominance and grandiosity), *disinhibition* (i.e., impulsivity and sensation seeking), and *psychoticism* (i.e., a disconnection from reality and a tendency to experience illogical thought patterns). These pathological personality traits are considered to be pathological versions of the Big Five personality dimensions of emotional stability (negative affectivity), low extraversion (detachment), low agreeableness (antagonism), low conscientiousness (disinhibition), and openness (psychoticism; Thomas et al., 2013). Various studies have shown that negative affectivity, detachment, antagonism, and disinhibition are strongly correlated with the appropriate Big Five dimensions (e.g., Few et al., 2013; Quilty, Ayearst, Chmielewski, Pollock, & Bagby, 2013; Thomas et al., 2013) but the association between psychoticism and openness has been far less consistent (e.g., Chmielewski, Bagby, Markon, Ring, & Ryder, 2014; De Fruyt et al., 2013; Few et al., 2013; Gore & Widiger, 2013; Suzuki, Samuel, Pahlen, & Krueger, 2015; Watson, Stasik, Ro, & Clark, 2013).

In addition to the five pathological personality trait domains introduced in *DSM-5*, this new view of pathological personality traits is focused on the level of personality functioning (American Psychiatric Association, 2013; Lowyck, Luyten, Verhaest, Vandeneede, & Vermote, 2013). The first area of personality impairment focuses on the *self* and has two distinct categories: identity and self-direction. Identity refers to the experience of oneself as a unique person, the stability of self-esteem, the accuracy of self-appraisal, and the ability to regulate a range of emotional experience. Self-direction refers to the pursuit of coherent and meaningful goals, the utilization of constructive and prosocial standards of behavior, and the ability to self-reflect in a productive manner. The second area of personality impairment concerns *interpersonal relationships* and has two distinct categories: empathy and intimacy. Empathy captures the comprehension and appreciation of others' experiences

and motivations, the tolerance of differing perspectives, and the understanding of the effects of one's own behavior on others. Intimacy pertains to the depth and duration of positive connections with others, the desire and capacity for closeness, and the mutuality of regard reflected in interpersonal behavior (Zimmermann et al., 2014).

The PID-5 is an instrument for assessing pathological personality traits. There are two forms available for assessing pathological personality traits in children between the ages of 11 to 17 (i.e., a full and a brief form) and three forms available for assessing pathological personality traits in adults over the age of 18 (i.e., a full, a brief, and an informant form). The most commonly used form of the PID-5 is the adult full form which consists of 220 statements to be assessed as a means of diagnosing pathological personality traits which may be helpful for understanding personality disorders. The respondent is asked to read each statement (e.g., "I do things to make sure people notice me") and then rate the extent to which each statement is true for him or her on a scale that ranges from 0 (*very false or often false*) to 3 (*very true or often true*). These items capture 25 facets (e.g., anxiousness, impulsivity, risk taking) which are grouped into the five pathological personality trait domains. These domains provide the broad, yet dimensional diagnosis that was promised in the *DSM-5*. The five factors can further be separated into a hierarchy that branches into internalizing and externalizing forms of psychopathology. The internalizing section is characterized by facets including depressivity, perseveration, anxiousness, withdrawal, and anhedonia. The externalizing factors are characterized by manipulateness, deceitfulness, attention seeking, grandiosity, irresponsibility, impulsivity, and risk taking (Wright et al., 2012).

An individual with high levels of negative affectivity will experience negative moods, specifically emotions that impair adaptive functioning and well-being. This is due to the activation of the short-term danger detection system as a response to perceived danger (Harkness, Reynolds, & Lilienfeld, 2014). These individuals respond to cues of danger, such

as sudden visual or auditory stimuli, rather than danger itself, possibly due to classical conditioning from a traumatic accident or a residual mammalian evolutionary function. The constant perceived dangerous threats lead to the triggering of the sympathetic nervous system (SNS) much more often than other individuals which will increase blood pressure and heart rate as well as narrow cognitive capacity. The personality trait facets from the PID-5 associated with negative affectivity are emotional lability, anxiousness, and separation insecurity. Therefore, it emerged from the internalizing form of psychopathology in the hierarchy.

Detachment is characterized by dissociation and depersonalization from the self and others. It is thought that these traits are due to the resource acquisition system which is a need for the accumulation of resources or resource opportunities for self-satisfaction or self-benefit (Harkness et al., 2014). The positive emotions associated with obtaining resources are due to the release of endogenous opiates and allows for the positive reinforcement of the same behavior. Therefore, these individuals will have heightened cognitive associations and memory access in order to allow creative planning for a more proficient goal fulfilment. The personality trait facets from the PID-5 include withdrawal, anhedonia, and intimacy avoidance. Therefore, it emerged from the internalizing form of psychopathology in the hierarchy.

Antagonism is often expressed as opposition or hostility toward others, either in a violent or nonviolent way. These traits are possibly due to the activation of the agenda protection system which heightens the individual's need to put his or her own wants or desires above those of others (Harkness et al., 2014). Aggressiveness is a common defense mechanism due to the activation of the SNS, known as the "fight or flight" system, when there is a perceived threat to their personal agenda. The personality trait facets from the PID-

5 include manipulativeness, deceitfulness, and grandiosity. Therefore, it emerged from the externalizing form of psychopathology in the hierarchy.

An individual who is disinhibited will experience a lack of restraint, a disregard for social conventions, impulsivity, and poor risk assessment. These traits are a result of a lack of the long-term cost-benefit analysis system (Harkness et al., 2014). This system allows for an adaptive advantage since it is evolutionarily favorable to learn from the past in an effort to prevent potential danger in the future. Individuals with high levels of disinhibition will not assess positive or negative consequences before their actions or learn from their past actions to prevent the same consequences from happening in the future. The personality trait facets from the PID-5 include irresponsibility, impulsivity, and distractibility. Therefore, it most likely emerged from the externalizing form of psychopathology in the hierarchy.

Psychoticism reflects abnormal functioning of the reality modeling for action system (Harkness et al., 2014). In most individuals, the reality modeling system takes incoming stimuli and combines it with societal norms and adaptive mechanisms in order to create a perceived reality that can be modified in two ways: (1) *assimilation* which refers to taking in new stimuli and bending it to fit an existing internal reality and (2) *accommodation* which refers to altering the existing internal reality to fit the incoming stimuli. Either the assimilation or the accommodation methods of forming an internal reality can be compromised in individuals with high levels of psychoticism. For example, a person with high levels of psychoticism may develop delusions if he or she fails to use accommodation when forming an internal reality. The personality facets from the PID-5 include unusual beliefs and experiences, eccentricity, and perceptual dysregulation. Psychoticism does not appear to have emerged from either the internalizing or externalizing forms of psychopathology in the hierarchy.

The purpose of the present study was to examine whether these pathological personality traits were associated with self-esteem reactivity to certain kinds of daily experiences. More specifically, the focus was on whether pathological personality traits would be associated with how responsive individuals were to daily experiences of inclusion and status. Sociometer theory (Leary, Tambor, Terdal, & Downs, 1995) and Hierometer theory (Mahadevan, Gregg, Sedikides, & de Waal-Andrews, 2016) may shed light on how state self-esteem – which refers to an individual’s attitude toward oneself at a particular moment – may change in accordance with perceptions of inclusion and status. Individuals with high state self-esteem tend to report experiencing more positive interactions and have higher personal regard for themselves than individuals with low state self-esteem. The two theories may work together in order to predict how certain situations will impact self-esteem in average individuals with regard to personality as well as motivations for social behaviors. Although both theories are accepted to varying degrees, the Sociometer theory has the most research supporting it, whereas the Hierometer theory is a relatively new idea.

The Sociometer theory states that all beings have a fundamental need to belong within a social group. When two people are cooperating toward a certain goal, both people are receiving mutual gain. On the other hand, excluding oneself from others can decrease certain prospects for survival and limit reproductive opportunities. Socially excluded individuals evaluate others more favorably, express a stronger desire to work with them, and report a greater interest in making new friends (Maner et al., 2007). For example, a man who collaborates with his coworkers on a project will get more work done faster and will be more trusted within the workplace, including with potential mates. Therefore, the Sociometer theory suggests that the more included in a social group that an individual feels, the higher their perceived self-esteem tends to be (e.g., Leary et al., 1995).

The Sociometer theory also explains the importance of contingent self-esteem which is based on the approval of others due to certain traits. For example, some individuals place much more importance on traits such as intellect or athleticism than others. When an individual who places a great deal of importance on intelligence fails an exam, his or her state self-esteem is likely to be negatively impacted to a much greater extent than an individual who got the same grade on an exam but bases his or her feelings of self-worth on another domain (e.g., athleticism). The Sociometer model states that this is largely due to the fact that an individual who has been accepted into a social group will want to remain in that group in order to feel inclusion within society. Therefore, if the members of a social group consistently gets good grades on exams, then individual members of the group will be socially motivated to get good grades and will be more negatively impacted by lower grades in order to avoid social exclusion. This may explain why some individuals have feelings of self-worth that appear to be highly sensitive and fluctuate more than what is expected (Leary et al., 1995). Contingent self-esteem can also arise due to more superficial reasons. Individuals may tend to adopt traits or increase the importance of certain traits if they have personal idols or find a social group with higher status where the members tend to exhibit these traits. People tend to seek out the social group with the highest status and show a strong desire to gain acceptance which leads to elevated levels of confidence when individuals are successful in satisfying these desires (Anthony, Holmes, & Wood, 2007).

Social roles are positions that individuals hold within society or personal relationships, and they may play a significant role in how individuals feel about themselves (Stets & Burke, 2003). That is, the way individuals feel about themselves may depend to at least some extent on how they think others perceive them. For example, an individual may feel confined to a specific gender role (either a man or a woman) when they actually identify as somewhere along the gender spectrum (they may have a mixture of traits that society

considers to be “masculine” or “feminine”; Anthony et al., 2007). These societal expectations place pressure on individuals to behave a certain way in order to feel included within their society. This can lead to a lower state self-esteem if in individual attempts to behave contrary to how he or she perceives oneself, or it can lead to exclusion from social groups if the individual decides to behave in a manner that contradicts societal norms.

Another model that is concerned with changes in state self-esteem is the Hierometer theory (Mahadevan et al., 2016). Unlike the Sociometer theory which argues that state self-esteem changes in accordance with perceived inclusion, the Hierometer model argues that state self-esteem is linked to perceptions of social status. The basic idea is that state self-esteem tracks an individual’s status such that the individual experiences relatively high levels of state self-esteem when his or her perceived status is relatively high. This is important because individuals with higher levels of status tend to enjoy better health and well-being and wider selection of mates than those of a lower status. For example, a man who is wealthy and owns a successful company will have more money to pay for better health care and attract more mates than the man who is unable to afford luxuries. Therefore, the Hierometer theory suggests that state self-esteem may be attuned to status to help individuals manage their position in the local social hierarchy.

By monitoring the state self-esteem levels of individuals with pathological personality traits, it may be possible to gain a more nuanced understanding of what experiences are associated with changes in their moment-to-moment feelings of self-worth. The most accepted reason average individuals strive for a high state self-esteem is that it decreases negative emotions and increases personal satisfaction. Individuals who tend to experience low levels of state self-esteem tend to have a self-protective lifestyle whereas those with high levels of state self-esteem tend to have a more risky lifestyle (Anthony et al., 2007). It is important to note that state self-esteem is internal and subjective so it can be difficult to

accurately measure an individual's state self-esteem and this problem may be exacerbated for individuals with pathological personality traits due to their tendency to be deceptive and their limited insight.

The following hypotheses were explored in this research:

Hypothesis 1: Perceived inclusion would be positively associated with state self-esteem. This is consistent with the Sociometer theory.

Hypothesis 2: Perceived status would be positively associated with state self-esteem. This is consistent with the Hierometer theory.

Hypothesis 3: Negative affectivity would be negatively associated with average levels of perceived status, perceived inclusion, and state self-esteem. This can be explained by the increased perception of potential threats.

Hypothesis 4: Antagonism would be positively associated with the average levels of perceived status and state self-esteem and negatively associated with the average level of perceived inclusion. This can be explained by the desire to protect their own agenda while disregarding the goals and motivations of others.

Hypothesis 5: Detachment would be negatively associated with average levels of perceived status, perceived inclusion, and state self-esteem. This can be explained by the lack of social involvement that characterizes those with high levels of detachment.

Hypothesis 6: Antagonism would moderate the associations that perceived status and perceived inclusion had with state self-esteem such that those with high levels of antagonism would have a stronger association between perceived status and state self-esteem as well as a weaker association between perceived inclusion and state self-esteem. This is explained by individuals with high levels of antagonism having a strong desire to protect their own agendas while having little regard for others.

Hypothesis 7: Detachment would moderate the associations that perceived status and perceived inclusion had with state self-esteem such that the associations would be weaker for those with high levels of detachment (and stronger for those with low levels of detachment). This is explained by individuals with high levels of detachment having relatively little concern about their connections with others.

No hypotheses were made about disinhibition and psychoticism. These pathological personality traits were only examined for exploratory purposes.

## **Method**

### **Participants and Procedure**

Participation in the present research involved two phases. Participants in Phase 1 of this study were 1,133 undergraduates at Oakland University who participated in return for partial fulfillment of a research participation requirement. Participants completed measures of pathological personality traits – along with other measures that are not relevant to the present study – via a secure website. Following the completion of these measures, participants were eligible to register for a second study (Phase 2) which asked them to complete measures of state self-esteem and their daily perceptions of status and inclusion via the internet each evening at approximately 10pm for 7 consecutive days. Of these 1,131 participants, 651 participants took part in Phase 2. Analyses concerning daily measures were conducted using the remaining 651 participants (98 men, 553 women). The mean age of the final participants was 19.77 years ( $SD = 3.97$ ) and their racial/ethnic composition was 81% White, 7% Black, 2% Hispanic, 5% Asian, and 5% Other. In sum, these 651 participants contributed a total of 2,834 daily reports which is an average of 4.35 reports for each participant.

### **Measures**

**Pathological Personality Traits.** Pathological personality traits were assessed with the brief form of the Personality Inventory for the *DSM-5* (PID-5-BF; Krueger, Derringer,

Markon, Watson, & Skodol, 2012). The PID-5-BF is a 25-item instrument designed to assess the following five broad pathological personality trait dimensions: *negative affectivity* (5 items; e.g., “I worry about almost everything” [ $\alpha = .78$ ]), *detachment* (5 items; e.g., “I don’t like to get too close to people” [ $\alpha = .79$ ]), *antagonism* (5 items; e.g., “I use people to get what I want” [ $\alpha = .80$ ]), *disinhibition* (5 items; e.g., “People would describe me as reckless” [ $\alpha = .81$ ]), and *psychoticism* (5 items; e.g., “My thoughts often don’t make sense to others” [ $\alpha = .82$ ]). Participants were asked to rate how accurately each of the items of the PID-5-BF described them using scales ranging from 0 (*very false or often very false*) to 3 (*very true or often true*). Responses to these items were averaged to create scale scores for each pathological personality trait.

**Daily Perceptions of Status and Inclusion.** Daily perceptions of status and inclusion were measured at the end of each day using a modified version of the Social Relations Inventory (Huo, Binning, & Molina, 2010; Mahadevan et al., 2016) which captures *status* (8 items; e.g., “I feel that people see me as an important person” [ $\alpha = .92$  averaged across the 7 days]) and *inclusion* (9 items; e.g., “I feel that people like me as a person” [ $\alpha = .93$  averaged across the 7 days]). This modified instrument captured daily perceptions of status and inclusion by asking participants to provide the response that best reflected how they felt at that particular moment rather than how they typically or generally felt about themselves. Responses to these items were made on scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

**State Self-Esteem.** Participants were asked to complete a modified version of the Rosenberg Self-Esteem Scale via the internet at the end of each day for 7 consecutive days. This instrument was modified to capture state self-esteem by instructing participants to provide the response that best reflected how they felt at the moment they completed the

measure. Responses were made on scales ranging from 1 (*strongly disagree*) to 10 (*strongly agree*).

### Data Analyses

Multilevel models were used to examine whether various pathological personality traits moderated the associations that daily perceptions of status and inclusion had with state self-esteem. This data had a multilevel structure because observations at one level of analysis were embedded within the other level of analysis (i.e., daily measures were nested within individuals; Bryk, Raudenbush, & Congdon, 1998). This particular model involved two steps. The first step was to create a regression equation for each participant at Level 1 (the within-person level) to calculate the intercept and slope coefficients which provide relations between variables at the daily level (e.g., Does state self-esteem tend to be lower on days when individuals perceived their status to be relatively low?). The second step was to determine if the Level 2 analyses (the between-persons level) produced regression slopes obtained from the Level 1 analyses that differed between participants depending on their level of pathological personality traits (e.g., Are individuals with high levels of antagonism especially likely to report lower levels of state self-esteem on days when they perceived themselves to have low levels of status?). These models were specified as:

$$\text{Level 1: STATE SELF-ESTEEM}_{ij} = \beta_{0j} + \beta_{1j}\text{PERCEIVED STATUS} + \\ \beta_{2j}\text{PERCEIVED INCLUSION} + r_{ij};$$

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \gamma_{01}\text{NEGATIVE AFFECTIVITY} + \gamma_{02}\text{DETACHMENT} + \\ \gamma_{03}\text{ANTAGONISM} + \gamma_{04}\text{DISINHIBITION} + \\ \gamma_{05}\text{PSYCHOTICISM} + u_{0j}; \\ \beta_{1j} = \gamma_{10} + \gamma_{11}\text{NEGATIVE AFFECTIVITY} + \gamma_{12}\text{DETACHMENT} + \\ \gamma_{13}\text{ANTAGONISM} + \gamma_{14}\text{DISINHIBITION} + \\ \gamma_{15}\text{PSYCHOTICISM} + u_{1j};$$

$$\beta_{2j} = \gamma_{20} + \gamma_{21}\text{NEGATIVE AFFECTIVITY} + \gamma_{22}\text{DETACHMENT} + \\ \gamma_{23}\text{ANTAGONISM} + \gamma_{24}\text{DISINHIBITION} + \\ \gamma_{25}\text{PSYCHOTICISM} + u_{2j}.$$

In the Level 1 (within-person level) model, State Self-Esteem<sub>ij</sub> represents the state self-esteem for person *j* on day *i*,  $\beta_{0j}$  is a random coefficient representing the intercept for person *j*,  $\beta_{1j}$  is a random coefficient for daily perceptions of status,  $\beta_{2j}$  is a random coefficient for daily perceptions of inclusion, and  $r_{ij}$  represents error. The within-person intercepts and slopes are then modeled at Level 2 such that  $\gamma_{00}$  represents the expected level of state self-esteem for a person who experienced an average level of perceived status and inclusion on that particular day and the  $\gamma_{01}$ ,  $\gamma_{02}$ ,  $\gamma_{03}$ ,  $\gamma_{04}$ , and  $\gamma_{05}$  coefficients represent the between-persons associations that the pathological personality traits have with state self-esteem. The  $\gamma_{10}$  coefficient represents the average within-person association that daily perceived status has with state self-esteem and the  $\gamma_{11}$ ,  $\gamma_{12}$ ,  $\gamma_{13}$ ,  $\gamma_{14}$ , and  $\gamma_{15}$  coefficients reflect the extent to which the pathological personality traits moderate the within-person association between daily perceived status and state self-esteem. The  $\gamma_{20}$  coefficient represents the average within-person association that daily perceived inclusion has with state self-esteem and the  $\gamma_{21}$ ,  $\gamma_{22}$ ,  $\gamma_{23}$ ,  $\gamma_{24}$ , and  $\gamma_{25}$  coefficients reflect the extent to which the pathological personality traits moderate the within-person association between daily perceived inclusion and state self-esteem. The residual variances that are unexplained by between-persons differences are represented by  $u_{0j}$ ,  $u_{1j}$ , and  $u_{2j}$ .

## Results

Descriptive statistics and zero-order correlations between the PID-5 pathological personality traits and the daily measures of perceived status, perceived inclusion, and state self-esteem are presented in Table 1. The pathological personality traits were positively associated with each other. Each of the pathological personality traits were negatively

associated with the average levels of daily perceived status, daily perceived inclusion, and state self-esteem. In addition, the average levels of daily perceived status, daily perceived inclusion, and state self-esteem were positively associated with each other.

### **The Associations that Daily Perceptions of Status and Inclusion had with State Self-Esteem**

Two-level models were used to examine the within-person relationships that daily perceptions of status and inclusion had with state self-esteem. For these analyses, the daily perceptions of status and inclusion were person-mean centered (Raudenbush & Bryk, 2002). This technique was used because there was considerable variability in the perceptions of status and inclusion that were reported across days (e.g., participants reported higher levels of perceived status on some days than others) as well as the perceptions of status and inclusion reported across participants (e.g., some participants reported higher levels of perceived status than were reported by other participants). Person-mean centering reduces the influence of habituation to the participant's average perception of his or her level of status and inclusion and adjusts for possible self-report biases. The use of person-mean centering for daily perceptions of status and inclusion allowed us to examine the association between state self-esteem and deviations from the normal daily perceptions of status and inclusion that are reported by the participant (e.g., Do participants report higher levels of state self-esteem on those days when they report higher levels of perceived status than is typical for them?).

The connections that daily perceptions of status and inclusion had with state self-esteem were first examined across all participants without accounting for pathological personality traits. As expected, participants reported higher levels of state self-esteem on the days when they reported experiencing higher levels of perceived status ( $B = 0.45$ ,  $SE = 0.07$ ,  $t = 6.57$ ,  $p < .001$ ) and higher levels of perceived inclusion ( $B = 0.46$ ,  $SE = 0.05$ ,  $t = 8.42$ ,  $p <$

.001). These results show that individuals tend to report higher levels of state self-esteem on the days when they perceive themselves as having higher levels of status and inclusion.

### **The Associations that Pathological Personality Traits had with the Average Daily Perceptions of Status and Inclusion and the Average Daily Level of State Self-Esteem**

The Level 2 (between-persons) analyses first examined whether the pathological personality traits were associated with the average levels of daily perceived status, daily perceived inclusion, and state self-esteem (e.g., Do individuals with higher levels of antagonism tend to report higher average levels of perceived status than individuals with lower levels of antagonism?). This type of analysis is referred to as a *means as outcomes* analysis (Bryk & Raudenbush, 1992; Nezlek & Zyzniewski, 1998).

*Daily Perceptions of Status.* The analysis concerning the average level of perceived status revealed negative associations for negative affectivity ( $B = -0.17$ ,  $SE = 0.05$ ,  $t = -3.25$ ,  $p = .002$ ), detachment ( $B = -0.41$ ,  $SE = 0.07$ ,  $t = -5.81$ ,  $p < .001$ ), and psychoticism ( $B = -0.19$ ,  $SE = 0.07$ ,  $t = -2.83$ ,  $p = .005$ ) as well as a positive association for antagonism ( $B = 0.29$ ,  $SE = 0.08$ ,  $t = 3.69$ ,  $p < .001$ ). There was not a significant association for disinhibition ( $B = -0.07$ ,  $SE = 0.07$ ,  $t = -1.17$ ,  $p = .24$ ). These results show that individuals who possess high levels of negative affectivity, detachment, and psychoticism tend to report lower average levels of perceived status, whereas individuals who possess high levels of antagonism tend to report higher average levels of perceived status.

*Daily Perceptions of Inclusion.* The analysis concerning the average level of perceived inclusion revealed negative associations for negative affectivity ( $B = -0.12$ ,  $SE = 0.04$ ,  $t = -2.67$ ,  $p = .008$ ), detachment ( $B = -0.47$ ,  $SE = 0.07$ ,  $t = -7.17$ ,  $p < .001$ ), and psychoticism ( $B = -0.16$ ,  $SE = 0.06$ ,  $t = -2.71$ ,  $p = .007$ ). There was not a significant association for antagonism ( $B = 0.12$ ,  $SE = 0.07$ ,  $t = 1.68$ ,  $p = .09$ ) or disinhibition ( $B = -0.06$ ,  $SE = 0.06$ ,  $t = -0.93$ ,  $p = .35$ ). These results show that individuals who possess high levels of

negative affectivity, detachment, and psychoticism tend to report lower average levels of perceived inclusion.

*Daily Perceptions of Self-Esteem.* The analysis concerning the average level of perceived self-esteem revealed negative associations for negative affectivity ( $B = -0.51$ ,  $SE = 0.10$ ,  $t = -5.17$ ,  $p < .001$ ), detachment ( $B = -1.25$ ,  $SE = 0.13$ ,  $t = -9.58$ ,  $p < .001$ ), disinhibition ( $B = -0.26$ ,  $SE = 0.12$ ,  $t = -2.13$ ,  $p = .033$ ), and psychoticism ( $B = -0.40$ ,  $SE = 0.12$ ,  $t = -3.30$ ,  $p = .001$ ) as well as a positive association for antagonism ( $B = 0.41$ ,  $SE = 0.15$ ,  $t = 2.84$ ,  $p = .005$ ). These results show that individuals who possess high levels of negative affectivity, detachment, disinhibition, and psychoticism tend to report lower average levels of state self-esteem, whereas individuals who possess high levels of antagonism tend to report higher average levels of state self-esteem.

### **Pathological Personality Traits as Moderators of the Associations that Daily Perceptions of Status and Inclusion have with State Self-Esteem**

The second purpose of the Level 2 (between-persons) analyses was to examine whether the pathological personality traits moderated the associations that daily perceptions of status and inclusion had with state self-esteem (e.g., Do individuals with high levels of negative affectivity report especially low levels of state self-esteem on the days when they report experiencing lower levels of perceived status than is typical for them?). This type of analysis is referred to as a *slopes as outcomes* analysis (Bryk & Raudenbush, 1992). The association between daily perceptions of status and state self-esteem was moderated by negative affectivity ( $B = 0.28$ ,  $SE = 0.11$ ,  $t = 2.59$ ,  $p = .01$ ) and detachment ( $B = -0.33$ ,  $SE = 0.13$ ,  $t = -2.55$ ,  $p = .01$ ). The predicted values for the cross-level interaction of negative affectivity  $\times$  perceived status are presented in Figure 1. The pattern of this interaction revealed a positive association between perceived status and state self-esteem with this association being especially strong for individuals with high levels of negative affectivity.

These results show that the lowest levels of state self-esteem were reported by individuals with high levels of negative affectivity on days when they perceived themselves as having low levels of status.

The predicted values for the cross-level interaction of detachment  $\times$  perceived status are presented in Figure 2. The pattern of this interaction revealed a positive association between perceived status and state self-esteem with this association being stronger for individuals with low levels of detachment. These results show that the highest levels of state self-esteem were reported by individuals with low levels of detachment on days when they perceived themselves as having high levels of status.

### **Discussion**

The results of the present study provided partial support for my hypotheses. For example, my first hypothesis was that perceived inclusion would be positively associated with state self-esteem. This hypothesis was supported by the present results and suggests that individuals tend to experience higher levels of state self-esteem on days when they perceive themselves to be more included within their social network. This is consistent with the Sociometer theory in which individuals have higher state self-esteem when they perceive themselves to be part of social groups and lower state self-esteem when they perceive themselves as being excluded from social groups.

My second hypothesis was that perceived status would be positively associated with state self-esteem. This hypothesis was supported by the present results and suggests that individuals tend to experience higher levels of state self-esteem on days when they perceive themselves to have higher social status than their peers. This is consistent with the Hierometer theory in which individuals have higher state self-esteem when they have higher perceived status and lower state self-esteem when they have average or low perceived social status.

My third hypothesis was that negative affectivity would be negatively associated with average levels of perceived status, perceived inclusion, and state self-esteem. This hypothesis was supported by the present results such that individuals with high levels of negative affectivity tended to report lower levels of daily status, daily inclusion, and state self-esteem. These results are consistent with the idea that individuals who are predisposed to experience negative emotional states also tend to have negative views of their social relationships (e.g., low levels of status and inclusion) as well as low levels of state self-esteem. It is also important to note that negative affectivity moderated the association that perceived status had with state self-esteem such that the association between perceived status and state self-esteem was especially strong for those individuals with high levels of negative affectivity. This pattern was not predicted so it is especially important for this to be replicated in future research.

My fourth hypothesis was that antagonism would be positively associated with the average levels of perceived status and state self-esteem and negatively associated with the average level of perceived inclusion. This hypothesis received little support. Antagonism had a negative zero-order correlation with perceived inclusion as expected but it also had negative zero-order correlations with perceived status and state self-esteem that contradicted my prediction that these associations would be positive. Further, antagonism did not have unique associations with the average levels of perceived status, perceived inclusion, or state self-esteem when the other pathological personality traits were included in the analysis.

My fifth hypothesis was that detachment would be negatively associated with average levels of perceived status, perceived inclusion, and state self-esteem. This hypothesis was supported by the present results such that individuals with high levels of detachment tended to report lower levels of daily status, daily inclusion, and state self-esteem. These results are consistent with the idea that individuals who are detached from others tend to have negative

views of their social relationships (e.g., low levels of status and inclusion) as well as low levels of state self-esteem.

My sixth hypothesis was that antagonism would moderate the associations that perceived status and perceived inclusion had with state self-esteem such that those with high levels of antagonism would have a stronger association between perceived status and state self-esteem as well as a weaker association between perceived inclusion and state self-esteem. This hypothesis was not supported by the present results. That is, antagonism did not moderate the associations that daily perceptions of status or daily perceptions of inclusion had with state self-esteem. One possible explanation for the failure to find support for this hypothesis is that the levels of antagonism possessed by participants in the present study were not exceptionally high since this was an undergraduate sample rather than a clinical sample. It may be informative for future research to explore the role that antagonism may play in the associations that perceived status and perceived inclusion have with state self-esteem in individuals with more extreme levels of antagonism.

My seventh hypothesis was that detachment would moderate the associations that perceived status and perceived inclusion had with state self-esteem such that the associations would be weaker for those with high levels of detachment (and stronger for those with low levels of detachment). This hypothesis received partial support because detachment was found to moderate the association that perceived status had with state self-esteem such that the association between perceived status and state self-esteem was much stronger for those individuals with low levels of detachment. However, detachment did not moderate the association that perceived inclusion had with state self-esteem.

Although the present study had a number of strengths (e.g., large sample, utilized daily measures to capture psychological processes), it is important to acknowledge some of the potential limitations. The first limitation is that the direction of causality between

pathological personality traits and self-esteem reactivity cannot be determined due to the correlational nature of this study. The underlying process model for the present study was that pathological personality traits would influence how reactive individuals were to certain daily experiences (e.g., show a drop in state self-esteem when they perceived themselves to have low status). However, this causal sequence cannot be established from the present study. For example, it is quite possible that the heightened self-esteem reactivity of individuals to daily perceptions of status or inclusion may have actually influenced the development of pathological personality traits or that a third variable may have impacted the development of both pathological personality traits and self-esteem reactivity (e.g., early experiences in a harsh or unpredictable environment). Future research should attempt to gain a better understanding of the causal links between pathological personality traits and self-esteem reactivity using experimental designs or longitudinal studies. The second limitation is that the present study relied exclusively on self-report measures which makes it possible that these results may have been distorted by socially desirable responding. For example, it is possible that some individuals may have been reluctant to acknowledge their own pathological personality traits or admit how they felt about themselves on a particular day. Future research would benefit from utilizing strategies that are able to capture pathological personality traits, daily status, daily inclusion, and state self-esteem without being completely reliant on self-reports (e.g., observer ratings, clinical interviews, real-world behaviors). Despite these limitations, the results of the present study expands the current understanding of the connections between pathological personality traits and self-esteem reactivity.

## References

- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text Revision). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Anthony, D. B., Holmes, J. G., & Wood, J. V. (2007). Social acceptance and self-esteem: Tuning the sociometer to interpersonal value. *Journal of Personality and Social Psychology, 92*, 1024-1039.
- Chmielewski, M., Bagby, R. M., Markon, K., Ring, A. J., & Ryder, A. G. (2014). Openness to experience, intellect, schizotypal personality disorder, and psychoticism: Resolving the controversy. *Journal of Personality Disorders, 28*, 483-499.
- De Fruyt, F., De Clercq, B., De Bolle, M., Wille, B., Markon, K. E., & Krueger, R. F. (2013). General and maladaptive traits in a five-factor framework for the *DSM-5* in a university student sample. *Assessment, 20*, 295-307.
- DeYoung, C. G., Carey, B. E., Krueger, R. F., & Ross, S. R. 2016. Ten aspects of the Big Five in the Personality Inventory for *DSM-5*. *Personality Disorders: Theory, Research, and Treatment, 7*, 113-123.
- Few, L. R., Miller, J. D., Rothbaum, A. O., Meller, S., Maples, J., Terry, D. P., ...MacKillop, J. (2013). Examination of the Section III *DSM-5* diagnostic system for personality disorders in an outpatient clinical sample. *Journal of Abnormal Psychology, 122*, 1057-1069.
- Gore, W. L., & Widiger, T. A. (2013). The *DSM-5* dimensional trait model and five-factor models of general personality. *Journal of Abnormal Psychology, 122*, 816-821.

- Harkness, A. R., Reynolds, S. M., & Lilienfeld, S. O. (2014). A review of systems for psychology and psychiatry: Adaptive systems, Personality Psychopathology Five (PSY-5), and the *DSM-5*. *Journal of Personality Assessment*, *96*, 121-139.
- Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for *DSM-5*. *Psychological Medicine*, *42*, 1879-1890.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology*, *68*, 518-530.
- Lowyck, B., Luyten, P., Verhaest, Y., Vandeneede, B., & Vermote, R. (2013). Levels of personality functioning and their association with clinical features and interpersonal functioning in patients with personality disorders. *Journal of Personality Disorders*, *27*, 320-36.
- Mahadevan, N., Gregg, A. P., Sedikides, C., & de Waal-Andrews, W. G. (2016). Winners, losers, insiders, and outsiders: Comparing hierometer and sociometer theories of self-regard. *Frontiers in Psychology*, *7*, 334.
- Maner J. K., DeWall N., Baumeister R. F., & Schaller M. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the “porcupine problem.” *Journal of Personality and Social Psychology*, *92*, 42-55.
- Mischel, W. (1968). *Personality and assessment*. New York, NY: Wiley
- Ozaki, N., Goldman, D., Kaye, W. H., Plotnicov, K., Greenberg, B. D., Lappalainen, J., Rudnick, G., & Murphy, D. L. (2003). Serotonin transporter missense mutation associated with a complex neuropsychiatric phenotype. *Molecular Psychiatry*, *8*, 933-936.

- Quilty, L. C., Ayearst, L., Chmielewski, M., Pollock, B. G., & Bagby, R. M. (2013). The psychometric properties of the Personality Inventory for *DSM-5* in an APA *DSM-5* field trial sample. *Assessment, 20*, 362-369.
- Schmeck, K., Schlüter-Müller, S., Foelsch, P., & Doering, S. (2013). The role of identity in the *DSM-5* classification of personality disorders. *Child and Adolescent Psychiatry and Mental Health, 7*, 27.
- Skodol, A. E. (2012). Personality disorders in *DSM-5*. *Annual Review of Clinical Psychology, 8*, 317-344.
- Stets, J. E., & Burke, P. J. (2003). A sociological approach to self and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 128-152). New York, NY: Guilford Press.
- Suzuki, T., Samuel, D. B., Pahlen, S., & Krueger, R. F. (2015). *DSM-5* alternative personality disorder model traits as maladaptive extreme variants of the five-factor model: An item-response theory analysis. *Journal of Abnormal Psychology, 124*, 343-354.
- Thomas, K. M., Yalch, M. M., Krueger, R. F., Wright, A. G., Markon, K. E., & Hopwood, C. J. (2013). The convergent structure of *DSM-5* personality trait facets and five-factor model trait domains. *Assessment, 20*, 308-311.
- Watson, D., Stasik, S. M., Ro, E., & Clark, L. A. (2013). Integrating normal and pathological personality: Relating the *DSM-5* trait-dimensional model to general traits of personality. *Assessment, 20*, 312-326.
- Wright, Z. E., & Krueger, R. F. (in press) Pathological personality traits: The movement toward dimensional approaches to psychopathology. In V. Zeigler-Hill & T. K. Shackelford (Eds.), *The SAGE handbook of personality and individual differences: Volume 1. The science of personality and individual differences*. London: SAGE.

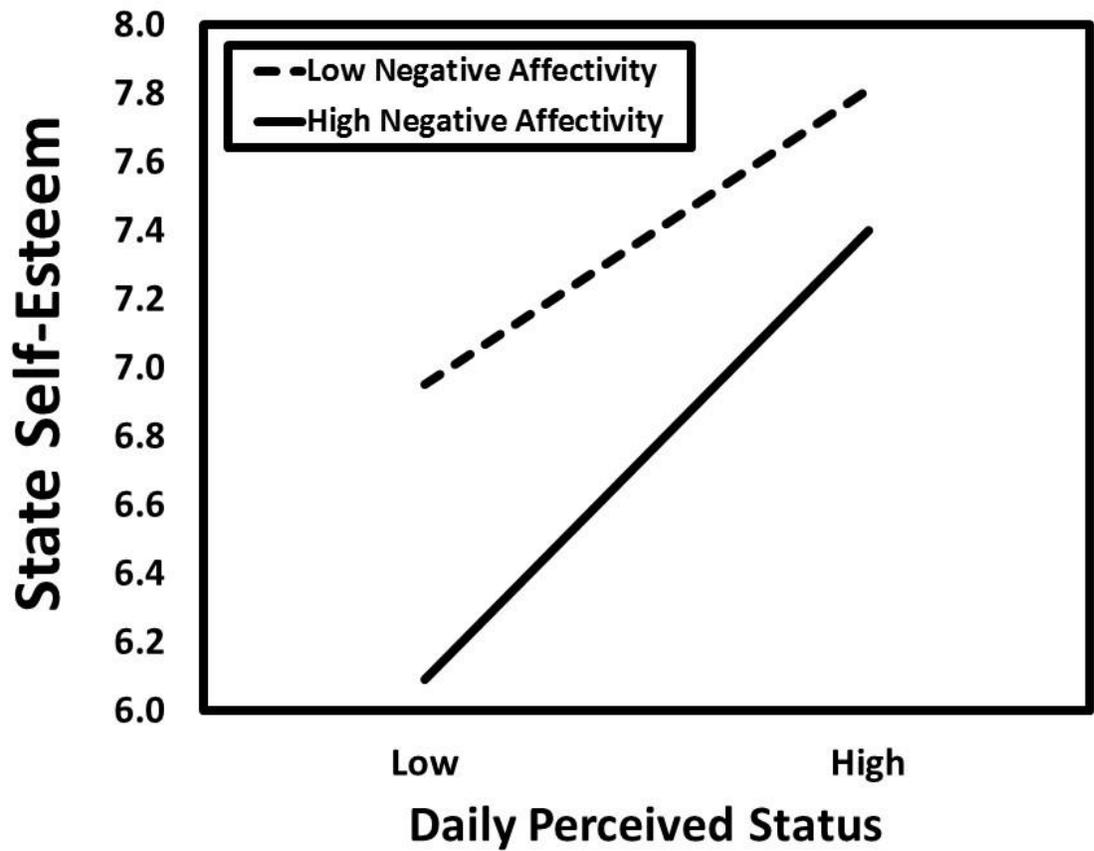
Wright, A. G. C., Thomas, K. M., Hopwood, C. J., Markon, K. E., Pincus, A. L., & Krueger, R. F. (2012). The hierarchical structure of *DSM-5* pathological personality traits. *Journal of Abnormal Psychology, 121*, 951-957.

Zimmermann, J., Benecke, C., Bender, D. S., Skodol, A. E., Schauenburg, H., Cierpka, M., & Leising, D. (2014) Assessing *DSM-5* level of personality functioning from videotaped clinical interviews: A pilot study with untrained and clinically inexperienced students. *Journal of Personality Assessment, 96*, 397-409.

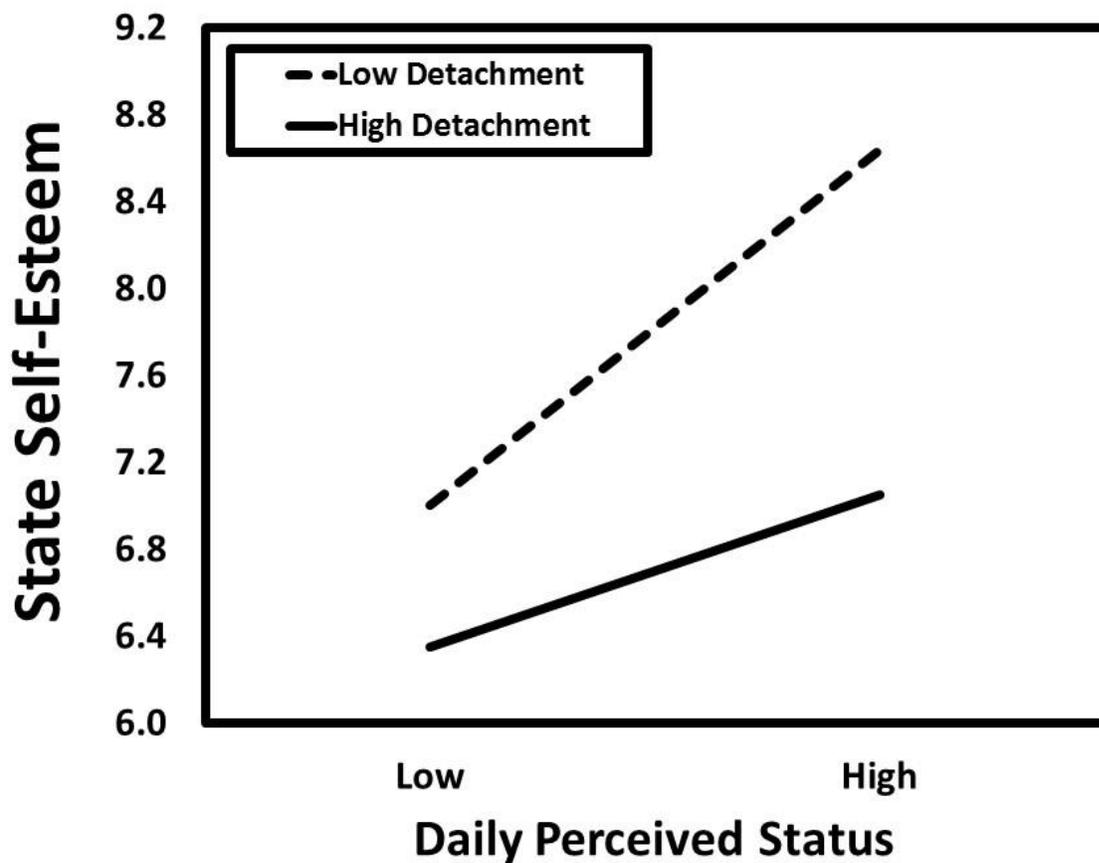
Table 1  
*Intercorrelations and Descriptive Statistics*

	1	2	3	4	5	6	7	8
1. Negative Affectivity	—							
2. Detachment	.46***	—						
3. Antagonism	.31***	.47***	—					
4. Disinhibition	.25***	.40***	.50***	—				
5. Psychoticism	.46***	.54***	.48***	.50***	—			
6. Average Level of Daily Status	-.29***	-.37***	-.10*	-.19***	-.31***	—		
7. Average Level of Daily Inclusion	-.31***	-.46***	-.21***	-.24***	-.36***	.82***	—	
8. Average Level of State Self-Esteem	-.43***	-.55***	-.25***	-.31***	-.43***	.70***	.74***	—
<i>Mean</i>	1.43	0.73	0.52	0.71	0.91	3.42	3.74	7.13
<i>Standard Deviation</i>	0.68	0.56	0.50	0.57	0.68	0.83	0.76	1.79

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .



**Figure 1.** Predicted values for state self-esteem illustrating the cross-level interaction of negative affectivity and daily perceptions of status at values that are one standard deviation above and below their respective means.



**Figure 2.** Predicted values for state self-esteem illustrating the cross-level interaction of detachment and daily perceptions of status at values that are one standard deviation above and below their respective means.