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LONGITUDINAL ASSOCIATIONS AMONG PATHOLOGICAL NARCISSISM, MULTIDIMENSIONAL PERFECTIONISM, SHAME, AND AGGRESSION

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ABSTRACT

The mechanisms that may contribute to the experience of shameful feelings and aggression in highly narcissistic individuals is not well understood. The present study used a longitudinal design to understand the dynamic nature of multidimensional perfectionism in pathological narcissism and its relationship with other constructs relevant to narcissism such as shame, socially aggressive behaviors, and physically aggressive feelings. State-like perfectionism dimensions and state-like perfectionistic self-presentation behaviors were examined as potential mediating factors in the link between pathological narcissism and outcomes of interest over a two-month study period. Additionally, narcissism was examined as a possible moderator of dynamic within-person associations among multidimensional perfectionism dimensions, shame, and aggression. A sample of undergraduate students (N = 228) completed a baseline measure of pathological narcissism, followed by weekly measures of perfectionism, perfectionistic self-presentation, shame, and antisocial behaviors (here, social aggression and physically aggressive feelings). Based on a multilevel structural equation modeling approach, full mediation was found for 1) average levels of weekly prevention focused perfectionistic self-presentation in the relationship between narcissism and the average likelihood of experiencing shameful feelings over time; and 2) average levels of weekly socially prescribed perfectionism (SPP) in the relationship between narcissism and average levels of weekly physically aggressive feelings, and separately, the average likelihood or degree to which an individual experiences shameful feelings over time. Partial mediation was found for average levels of weekly promotion focused perfectionistic self-presentation in the relationship between narcissism and average likelihood of experiencing shameful feelings over time, as well as for average levels of weekly prevention focused perfectionistic self-presentation, and separately

SPP, in the relationship between narcissism and average levels of weekly social aggression. Lastly, pathological narcissism was found to be a risk factor for the engagement of socially aggressive behaviors during weeks individuals report experiencing any of the following more than their usual: needing to promote an image of perfection, needing to conceal imperfections from others, holding the perception that others demand perfection from oneself, or having perfectionistic expectations for oneself. Findings from this study can inform models of pathological perfectionistic processes leading to increased shame and aggression in narcissistic individuals.

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Chapter 1

INTRODUCTION

Perfectionism, shame, and aggression have been considered central features of pathological narcissism since its earliest conceptualizations (e.g., Freud, 1923; Kohut, 1971, 1972; Ronningstam, 2010; Rothstein, 1984; Sorotzkin, 1985;). Specifically, perfectionism may be crucial for self, emotion, and/or behavior regulation in narcissistic pathology. Although emerging research has pointed to a relationship between maladaptive perfectionism and emotion dysregulation more generally (see review by Malivoire, Kuo, & Antony, 2019), empirical studies have yet to test whether perfectionism, in its multidimensional form, is a mechanism by which pathological narcissism may lead to greater feelings of shame and aggression over time. It would seem to be of importance then to examine whether multidimensional aspects of perfectionism have harmful and/or helpful effects on narcissistic individuals. Research has yet to explore how all of these variables (narcissism, perfectionism, shame, and aggression) function together over time, thereby limiting our understanding of the dynamic interplay of narcissism and perfectionism that might serve to impact the experience of shame and aggression.

Longitudinal designs provide one avenue to better understand the dynamic nature of perfectionism in narcissism and its associations with other relevant outcomes such as shame and aggression over time. This is so because longitudinal designs allow for causal inferences, identification of within-person temporal patterns, and tests of predictive

validity. Longitudinal studies are indeed important and needed because intraindividual variability and instability in psychiatric symptoms and negative affect are related to psychological difficulties and functional impairment for individuals (Odgers et al., 2009; Santangelo et al., 2014). Using an 8-week longitudinal study design, this dissertation aims to address the gaps in the literature in two ways. First, this study aims to test whether state-like perfectionism could (at least partly) explain why narcissism is related to negative affect (here, shame) and aggression-related outcomes (here, socially aggressive behaviors and physically aggressive feelings) over time. Second, this study examines how narcissism may impact weekly within-person experiences of perfectionism and shame/aggression over time.

Narcissism

Narcissism can be defined by an individual's tendency to seek out self-enhancement experiences from the social environment to satisfy his or hers need for validation and admiration (Morf, Horvath, & Torchetti, 2011). These needs and motives are normal characteristics of personality, but they can become pathological when they are extreme and coupled with impairments in regulatory capabilities (Pincus, 2013; Pincus, Roche, & Good, 2015). Contemporary clinical conceptualizations of narcissism encompass both narcissistic grandiosity and narcissistic vulnerability, two distinct phenotypic expressions of narcissistic pathology that have both been widely empirically supported across the fields of social/personality psychology, clinical psychology, and psychiatry (Cain, Pincus, & Ansell, 2008; Dawood, Wu, Bliton, & Pincus, 2020; Dowgwillo, Dawood, & Pincus, 2016), and both are recognized to be important for clinically significant narcissistic dysfunction (e.g., Horowitz, 2009; Kernberg, 2009;

Pincus, 2019; Pincus, Cain, & Wright, 2014; Ronningstam, 2009; Russ, Shedler, Westen, & Bradley, 2008).

A contemporary clinical model of pathological narcissism suggests narcissistic grandiosity involves maladaptive self-enhancement strategies characterized by an overly positive self-image with concomitant sense of entitlement, interpersonal exploitativeness, exhibitionism, and grandiose fantasies, while narcissistic vulnerability involves impaired self, emotion, and behavior regulation in response to self-enhancement failures and social disappointments (Pincus et al., 2009; Pincus & Roche, 2011). This narcissistic vulnerability is often reflected in experiences of low self-esteem, negative affectivity (e.g., dysphoria, shame, envy, anger), aggression, social avoidance, and interpersonal hypersensitivity (Akhtar, 2003; Dickinson & Pincus, 2003; Kohut & Wolf, 1978; Pincus et al., 2015; Ronningstam, 2005). Unfulfilled and frustrated narcissistic needs for external validation and admiration heightens sensitivity to the daily ups and downs of life and relationships, which leaves narcissistic individuals more likely to experience emotional and behavioral dysregulation (e.g., Besser & Priel, 2010; Besser, Zeigler-Hill, Weinberg, & Pincus, 2016; Dawood & Pincus, 2018; Ziegler-Hill & Besser, 2013).

Although narcissistic grandiosity and narcissistic vulnerability exhibit some distinct associations with a variety of clinically important domains (see Dawood et al., 2020; Dowgwillo et al., 2016; Pincus, 2013), they are positively associated with each other and together they make up the higher order construct of pathological narcissism (e.g., Wright, Lukowitsky, Pincus, & Conroy, 2010; Zeigler, Enjaian, & Essa, 2013). Symptomatic expressions of narcissistic grandiosity and narcissistic vulnerability can also be rigid or oscillating within the same individual (e.g., Gore & Widiger, 2016;

Pincus, Dowgwillo, & Greenberg, 2016; Edershile, Woods, Sharpe, Crowe, Miller, & Wright, 2019).

Recently, a structural imaging study found pathological narcissism relates to specific brain regions that may be associated with impaired emotion regulation processes, as well as impairments in social cognition (Mao et al., 2016). Moreover, experimental research demonstrates that pathological narcissism predicts contingent levels of implicit self-importance (Fetterman & Robinson, 2010). Overall, such findings provide further support for clinical descriptions of pathological narcissism emphasizing the variable and contingent nature of its significant emotion-, behavior-, and self-regulation deficits.

Narcissism and Shame

The failure to live up to expectations, standards, and ideals has been consistently related to experiences of shame (e.g., Miller, 1996; Sorotzkin, 1985; see review by Gilbert, 1998). Shame involves a negative evaluation of the self by the self or others (real or imagined) (Lewis, 1986). It can be conceptualized as a response to a perceived failure or deficit in the idealized self, thereby leading to feelings of powerlessness, worthlessness, and inadequacy (Lewis, 1971; Morrison, 1983). Common responses to shame can include a desire or motivation to avoid or escape from shame-inducing situation; displays of submission and appeasement (e.g., head down, eye gaze avoidance); and rage, anger, hostility, and aggression (e.g., Gilbert, 1998, 2000, 2002, 2007; Gilbert & McGuire, 1998; Keltner & Harker, 1998; Keltner, 1995; Lewis, 1971; Rochlin, 1973; Scheff, 1987; Tangney & Dearing, 2002; Tracy & Robins, 2004, 2007). Shamed individuals may engage in such maladaptive defensive responses to protect the self against perceived social rejection and attacks from others, minimize threats to one's

social image, or as an effort to regain agency and control (Gilbert, 2002; Lewis, 1971, 1992; Tangency & Dearing, 2002). The following subsection describes existing conceptualizations of the role shame plays in narcissism. Next, it briefly reviews a range of empirical literature regarding the relationship between trait narcissism and shame, as well as pathological narcissism and shame.

Conceptualizations of Narcissism and Shame. Shame has long been described as a prominent affect in pathological narcissism (e.g., Broucek, 1982, 1991; Kinston, 1983; Kohut, 1971, 1978; Lewis, 1986; Morrison, 1983; Nathanson, 1987). In the psychoanalytic literature, for instance, Kohut (1971, 1978) argues that the repeated failure by parents to respond empathically and support their child's normal grandiose needs hinders the child's ability to develop a cohesive sense of self and can lead to the development of pathological narcissism. He proposes that shame is a reaction to narcissistic injuries that stem from early childhood. The person may react with narcissistic rage or withdrawal to prevent feelings of shame that are related to perceived threat, resentment, and wounds to the self (Kohut, 1971, 1972). Kernberg (1975) theorized that pathological narcissism is connected to having cold, rejecting, or spiteful parents. He suggests that chronic parental insensitivity and childhood rejection may lead the child to develop a distorted self-image involving idealized and aggressive elements (i.e., grandiosity) that are split off from other devalued or vulnerable elements. In adulthood, this serves to shield the self from any sense of vulnerability, weakness, or dependence on others. However, when the narcissist fails to meet his or her idealized expectations for the self or receive needed admiration from others, shame may be experienced in relation to feelings of inferiority.

Contemporary theorists have proposed that shame is a notable feature of narcissistic vulnerability and that it may relate to the avoidance of interpersonal relationships in order to avoid exhibiting weaknesses and flaws, as well as to avoid experiencing criticisms and disappointments (Akhtar, 2003; Dickinson & Pincus, 2003; Ronningstam, 2005). Tracy, Cheng, Martens and Robins (2011) suggested that in the absence of contingencies (i.e., external indicators of self-worth), "implicit shame may rise to the surface of consciousness and lead to a drop in explicit self-esteem, resulting in more vulnerable narcissism" (p. 333). In other words, adverse events may further the experience of shame for narcissists who have a poorly regulated sense of self.

Accordingly, narcissists may engage in different self-enhancement efforts to avoid feelings of shame and to promote feelings of pride (Morf, Horvath, & Torchetti, 2011; Tracy & Robins, 2004). In order to suppress shame, narcissists may engage in externalizing behaviors such as physical altercations, theft, and substance abuse (Tracy et al., 2011). Narcissists may also blame others (an external attribution) for their failures and shortcomings and experience anger and hostility rather than shame by shifting the attention from the self to devalued others (Tracy & Robins, 2004). Similarly, others have suggested individuals with pathological narcissism may attempt to prevent or reduce the experience of shame through maladaptive emotion regulation strategies, including various forms of aggression, perfectionism, fantasies, diverting attention away from oneself and one's flaws, and explicit self-deprecation (Schoenleber & Berenbaum, 2012). Indeed, a recent study found aggressive behaviors among violent offenders with narcissistic traits may be a dysfunctional shame regulation strategy (Velotti, Rogier, & Sarlo, 2020). Schoenleber and Berenbaum (2012) also posit that the misuse of shame

regulation may lead to the development and/or maintenance of personality pathology more generally. The next few subsections highlight findings on narcissism-shame associations across cross-sectional, experimental, and daily diary studies.

Cross-sectional Findings on Trait Narcissism and Shame. Previous empirical studies have examined associations between narcissism and shame. Cross-sectional studies demonstrate that normal trait narcissism (typically limited to relatively adaptive grandiose themes) has a significant small to moderate negative correlation with shame-proneness in nonclinical individuals (Gramzow & Tangeny, 1992; Morf et al., 2017; Pincus et al., 2009; Schröder-Abé & Fatfouta, 2019; Watson, Hickman, & Morris, 1996). Additionally, grandiose narcissism predicts less shame, while vulnerable narcissism predicts increased proneness to shame (Krizan & Johar, 2015). These findings are perhaps unsurprising given that normal trait narcissism is associated with various aspects of positive psychological health, which is mediated by self-esteem (Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004). From a personality and social psychologist's perspective, narcissism may have adaptive qualities that make it "a functional and healthy strategy for dealing with the modern world" (p. 215) (Campbell, 2001). Hence, Campbell, Foster, and Brunell (2004) argue that narcissists may be more focused on gaining pride than avoiding shame. Empirical work shows grandiose narcissism leads to more (hubristic and achievement-oriented) pride and also inhibits an individual from feelings of shame (Uji, Nagata, & Kitamura, 2012). Taken together, findings from these studies appear to suggest that shame is less salient to individuals with normal trait narcissism.

Experimental Findings on Narcissistic Personality Disorder and Shame. A study by Ritter and colleagues (2014) examined shame in patients with Narcissistic Personality Disorder (NPD) without comorbid Borderline Personality Disorder (BPD) (*N*=28), patients with BPD without comorbid NPD (*N*=31), and nonclinical controls (*N*=34). They found that patients with NPD report significantly higher explicit state shame and shame-proneness compared to nonclinical controls but significantly lower levels of explicit shame than patients with borderline personality disorder. This study also found that NPD patients report significantly higher levels of implicit shame than BPD patients and nonclinical controls. Findings from this study highlight that both explicit and implicit shame have important associations with NPD.

Cross-sectional Findings on Narcissistic Personality Disorder and Shame. Recently, Fjermestad-Noll and colleagues (2020) examined the occurrence of shame, aggression, and perfectionism in a depressed group of patients with NPD and no other PD (*N* = 61) compared to a depressed group of patients without any PD (*N* = 56). In terms of narcissism-shame associations, they found that the NPD group reported significantly higher scores for shame. Cohen's effect size was high for shame.

Cross-sectional Findings on Pathological Narcissism and Shame. Past studies found pathological narcissism is moderately to strongly positively correlated with shame-proneness in a mixed community and student sample (Morf et al., 2017) and a young adult college student sample (Pincus et al., 2009). Both of these studies found all facets of narcissistic vulnerability (contingent self-esteem; hiding the self; devaluing; entitlement rage) have a moderate to large positive association with shame, with the strongest relationship between contingent self-esteem and shame. Of the three facets of narcissistic

grandiosity, they found grandiose fantasy and self-sacrificing self-enhancement are moderately positively correlated with shame, but exploitativeness exhibits either a positive non-significant (Pincus et al., 2009) or small negative significant correlation with shame (Morf et al., 2017). Additionally, previous studies found narcissistic vulnerability is more strongly related to shame-proneness, as well as to specific forms of shame (e.g., characterological shame, behavioral shame, and bodily shame), relative to narcissistic grandiosity (e.g., Jaksic, Marcinko, Hanzek, Rebernjak, & Ogrodniczuk, 2017; Keene & Epps, 2016; Krizan & Johar, 2015; Schoenleber, Roche, Wetzel, Pincus, & Roberts, 2015). In sum, findings from cross-sectional research indicate pathological forms of narcissism, especially contingent self-esteem (fluctuating levels of self-esteem), are more closely linked to experiences of shame in comparison to normal trait narcissism.

Daily Diary Findings on Pathological Narcissism and Shame. A recent study examined how pathological narcissism related to daily experience of shame in a nonclinical sample of young adults (Di Sarno, Zimmerman, Madeddu, Casini, & Di Pierro, 2020). They found that both trait and daily levels of vulnerable narcissism were positively associated with daily shame. Specifically, individuals were more likely to experience shame if they reported fragile self-esteem, a propensity to devalue intimacy for fear of disappointment, and strong needs for admiration. In contrast, there was no significant relationship between trait grandiose narcissism and shame after controlling for vulnerable narcissism. Additionally, daily grandiose narcissism was mostly negatively associated with shame. Altogether, research provides evidence that narcissistic individuals have experiences of trait and daily shame.

Narcissism and Aggression

Several theories have been put forth to explain relations between narcissism and aggression, two of which are “narcissistic rage” and “threatened egotism”. The following subsections includes descriptions of these theories and reviews empirical studies that lend support to these perspectives.

Narcissistic Rage Theory. As previously discussed, some psychoanalytic theorists (Kernberg, 1975; Kohut, 1972) posit that narcissistic rage stems from a fragile and vulnerable sense of self, which results in intense anger, vindictiveness, envy, and resentment when narcissists’ positive, grandiose self-image is threatened or when their entitled needs for validation from others are unmet. Feelings of shame, humiliation, dejection, inferiority, and sadness are often entwined with narcissistic rage that drive aggression and the desire for revenge (e.g., Kernberg, 1975; Kohut, 1972, 1978; Ronningstam, 2005). The aggression that ensues is dysfunctional because it is disproportionate and misdirected (Krizan & Johar, 2015).

Cross-Sectional Findings on Narcissistic Rage. Empirical evidence exists to support clinical accounts of narcissistic rage. Findings from cross-sectional research demonstrate vulnerable narcissism relates to uncontrolled anger, anger externalization, and anger internalization (Krizan & Johar, 2015). Of these anger expressions, grandiose narcissism only relates to anger externalization (Krizan & Johar, 2015). Moreover, vulnerable narcissism, but not grandiose narcissism, is a predictor of reactive aggression (retaliation against the original source of a provocation) and displaced aggression (retaliation against others who are not responsible for the original provocation), with angry rumination and mistrust accounting for these associations. Taken together, results point to narcissistic vulnerability as a key source of narcissistic rage.

Experimental Findings on Narcissistic Rage. There is also behavioral evidence for the narcissistic rage theory. A study examining relations between narcissism and aggression in a laboratory setting found those high in vulnerable narcissism, but not grandiose narcissism, respond to provocation with aggression, anger, depression, and mistrust (Krizan & Johar, 2015). Similarly, experimental research by Hart, Adams, and Tortoriello (2017) found that vulnerable narcissism relates to heightened negative emotionality (sadness, anger, hurt feelings), heightened aggression (combination of physical, verbal, and symbolic), hostile goals, and self-worth/defense goals.

Recent research examines how narcissists respond to de-escalated provocation (i.e., provocateur expresses concern and apologizes) versus escalated provocation (i.e., provocateur makes spiteful remark) (Hart, Tortoriello, & Richardson, 2018). They found, as expected, that vulnerable narcissism relates to heightened anger, perceived injury, and pursuit of narcissistic-identity goals (e.g., toughness, dominance) in the context of de-escalated provocation but not escalated provocation. This, in turn, results in greater aggression (combination of physical, verbal, and passive). Their findings did not, however, provide full support for the "narcissistic rage" account, as vulnerable narcissism did not interact with provocation type on aggression, revenge goals, or humiliation. According to Hart and colleagues (2018), these findings might suggest "the possible presence of aggression-inhibiting mechanisms that compete with these aggressive-inspiring mechanisms in de-escalation contexts" (p. 18). That is, despite feeling angry and injured, vulnerable narcissists may be driven to avoid negative evaluation by inhibiting the urge to aggress when there is overt social disapproval of aggression (Hart et al., 2018). Overall, findings from these laboratory studies indicate that individuals with

vulnerable narcissism experience high levels of negative affect (e.g., shame, anger), and respond to interpersonal frustration with aggression, angry rage, mistrust, and even depression.

Threatened Egotism Theory. According to the theory of threatened egotism (Bushman & Baumeister, 1998), narcissists may respond aggressively when their inflated, grandiose, or unjustified self-view is threatened. Examples of threats include negative, insulting evaluations, social rejection, and sexual refusal (Bushman & Baumeister, 1998; Bushman, Bonacci, van Dijk, & Baumeister, 2003; Twenge & Campbell, 2003). For narcissists, aggression may serve as one means to regulate their wounded self-esteem, establish dominance over others, and reaffirm their perceived entitlement and inflated self-views (Bushman & Baumeister, 1998; Campbell, Reeder, Sedikides, & Elliot, 2000; Morf & Rhodewalt, 2001).

Meta-analytic Findings on Narcissism and Ego Threat. A meta-analysis by Rasmussen (2016) tested the validity of the theory of threatened egotism across a variety of studies that used different measures of narcissism, provoked aggression, research designs, and types of samples. The findings generally support the threatened-egotism theory in that individuals with higher levels of narcissism report more vengeful behaviors when provoked by others relative to individuals low in narcissism. Moreover, the association between narcissism and provoked aggression appears mostly driven by a sense of entitlement. Although grandiose and vulnerable narcissism both positively relate to provoked aggression, only two out of 84 studies in the meta-analysis measured vulnerable narcissism, thus interpretation of findings must be approached with caution.

Review Paper Findings on Narcissism and Ego Threat. In a recent review, Lambe, Hamilton-Giachritsis, Garner, and Walker (2018) found that narcissism is related to a 1.2 to 11-fold increase in violence in clinical samples and a significant predictor of more severe forms of violence (e.g., homicide). Additionally, they found narcissism relates to increased aggression in student samples and that the narcissism-aggression relationship is greater following an ego threat (e.g., negative feedback, social rejection). They also found some indication that narcissistic individuals may displace aggression following an ego threat. Similar to previous research, however, the majority of studies in this review focused on examining relations between more normal grandiose traits of narcissism and aggression or violence. In fact, only two of the 25 studies reviewed assess vulnerable narcissism, thereby again, limiting our understanding of how individuals with pathological narcissism (combination of narcissistic grandiosity and narcissistic vulnerability; Pincus, 2019; Pincus et al., 2009; Pincus & Lukowitsky, 2010) react to potentially threatening situations.

Experimental Findings on Narcissism and Ego Threat. A few empirical studies show that narcissistic grandiosity and narcissistic vulnerability are both associated with more anger and negative affect in response to ego threat (e.g., Besser & Priel, 2010; Besser & Ziegler-Hill, 2010). More specifically, results from these studies indicate individuals high in narcissistic grandiosity react most strongly to achievement failure and public ego threats, whereas individuals high in narcissistic vulnerability react most strongly to interpersonal rejection and private ego threats. Furthermore, both normal and pathological forms of grandiose narcissism are more strongly related to heightened aggression (combination of physical, verbal, and passive) and narcissistic identity goals

following escalated (versus de-escalated) provocation (Hart et al., 2018). Whereas pathological grandiose narcissism appears to be associated with heightened perceptions of narcissistic injury, normal grandiose narcissism appears to be associated with heightened pursuit of revenge goals (Hart et al., 2018).

Narcissism and Specific Types of Aggression

Researchers have examined how both normal and pathological narcissism (grandiosity and vulnerability) relate to four commonly studied dimensions of aggression: anger, hostility, physical aggression, and verbal aggression. This next section highlights findings from past cross-sectional studies examining this research question in terms of aggressive behaviors. Also provided is an overview of extant studies examining relations between narcissism and less studied forms of aggression; specifically, relational aggression and specific subtypes of antisocial behaviors (here, social aggression and physical aggression).

Cross-sectional findings on Narcissism and Subdimensions of Aggression.

Previous studies found both normal and pathological narcissism positively relate to physical aggression (r= 0.29 – 0.32, $p < 0.001$ and $r = 0.24$, $p < 0.01$, respectively) and verbal aggression (r = 0.31 –0.40, $p < 0.001$ and $r = 0.23$, $p < 0.001$, respectively) in university student and community samples (e.g., Barnett & Powell, 2016; Houlcroft, Bore, & Munro, 2012; Morf et al., 2017). Depressed patients with NPD show significantly more elevated levels of physical aggression, verbal aggression, anger, and hostility compared to depressed patients without any personality disorder (Fjermestad-Noll et al., 2020). Furthermore, research using undergraduate students shows a positive significant zero-order correlation between narcissistic vulnerability and physical

aggression and verbal aggression and this pattern remains significant when narcissistic grandiosity is partialled out (Keene & Epps, 2016). Conversely, when narcissistic vulnerability is partialled out, the relationship between narcissistic grandiosity and aggressive behaviors (physical, verbal) no longer remains significant (Keene & Epps, 2016). This suggests narcissistic vulnerability may account for the variance in the results between narcissistic grandiosity and aggressive behaviors.

In sample groups of Japanese undergraduate students, a study by Okada (2010) found hypersensitive narcissism (labeled vulnerable narcissism) does not relate to physical aggression and significantly and negatively relates to verbal aggression. This pattern of results remains when controlling for sex, self-esteem, and grandiose narcissism. In contrast, grandiose narcissism relates significantly and positively to both physical and verbal aggression. This pattern of results remains when controlling for sex, self-esteem, and hypersensitive narcissism. Okada (2010) also found that individuals with higher levels of hypersensitive narcissism are more likely to express indirect or covert forms of aggression (hostility, anger) instead of direct forms of aggression (physical and verbal aggression). Moreover, when recalling a past experience of social rejection, individuals higher in hypersensitive narcissism are more likely to give a negative evaluation (index of indirect aggression) of a person who provoked them than individuals low in hypersensitive narcissism (Okada, 2010). Individuals with higher levels of grandiose narcissism did not exhibit aggressive behaviors in the social rejection condition, possibly due to the measure of aggression used (here, negative evaluation rather than unpleasant blasts of noise) (Okada, 2010). Taken together, these study results may put into perspective the aforementioned findings indicating individuals high in

narcissistic vulnerability respond strongly to interpersonal rejection and private ego threats with more anger and negative affect.

Cross-Sectional Findings on Narcissism and Relational Aggression. Another form of aggression that has been less studied in adults is relational aggression, which involves harming behaviors (e.g., gossip, social exclusion, manipulation) intended to damage or threaten social relationships (Crick & Grotpeter, 1995; Werner & Crick, 1999). Similar to physical and verbal aggression, relational aggression can function as a defensive or retaliatory response to real or perceived injury or threat (reactive aggression) or employed to achieve a specific goal or resource (proactive aggression) (Burton, Hafetz, & Henninger, 2007).

A recent study found that pathological narcissism is a predictor of relational aggression among emerging adults (Knight, Dahlen, Bullock-Yowell, & Madson, 2018). More specifically, narcissistic vulnerability positively predicts both reactive (hostile) and proactive (instrumental) relational aggression, while narcissistic grandiosity negatively predicts both reactive and proactive relational aggression (Knight et al., 2018). The researchers report that their findings could suggest that the inflated sense of self and superiority related to narcissistic grandiosity may mitigate the use of relational aggression. They also comment that grandiose narcissists may not expend the energy to harm others because they view others as inferior to them and thus unworthy of their time. In contrast, vulnerable narcissists may make greater use of relational aggression when they feel narcissistically injured (Knight et al., 2018).

Cross-sectional Findings on Narcissism and Antisocial Behaviors (Social Aggression and Physical Aggression). Social aggression closely resembles the

constructs of relational aggression and indirect aggression but is distinct from them because it broadly encompasses both verbal and nonverbal forms of social exclusion (the latter not included in relational aggression), and indirect and direct ways of harming others (the latter not included in indirect aggression) (see Archer & Coyne, 2005; Underwood, 2003). Additionally, some research shows social aggression and physical aggression are correlated dimensions of antisocial behavior (e.g., Burt & Donnellan, 2009, 2010; Card, Stucky, & Little, 2008). However, these behaviors also demonstrate meaningful differences with regards to demographics, peer relations, comorbid psychopathology, developmental trajectories, etiologies, and different correlates of antisocial and related behaviors (literature reviewed by Burt & Donnellan, 2012).

A study by Burt and Donnellan (2012) found that NPD traits and entitlement (an aspect of narcissism) are both significantly and positively associated with social aggression and physical aggression for samples of men (regarding NPD traits, $r = 0.37$, $p < 0.01$ and $r = 0.34$, $p < 0.01$ respectively; regarding entitlement, $r = 0.36$, $p < 0.01$ and $r = 0.30$, $p < 0.01$, respectively) and women (regarding NPD traits, $r = 0.28$, $p < 0.01$ and $r = 0.27$, $p < 0.01$; regarding entitlement, $r = 0.17$, $p < 0.01$ and $r = 0.16$, $p < 0.05$ respectively), in zero-order correlations. In terms of partial correlations results, NPD traits remained significantly related to social aggression in men and women, though to a lesser degree ($r = .18$, $p < 0.01$ and $r = 0.19$, $p < 0.01$, respectively), controlling for physical aggression and non-aggressive rule-breaking (the latter is considered to be another subtype of antisocial behavior). Moreover, NPD traits remained significantly associated with physical aggression in men (also to a lesser degree) ($r = .13$, $p < 0.05$), but no longer in women, controlling for social aggression and non-aggressive rule-

breaking. Entitlement became uniquely associated with social aggression controlling for the other two dimensions of antisocial behavior in men ($r = .22$, $p < 0.01$), but now unrelated to pure physical aggression in either sexes (Burt & Donnellan, 2012). In short, study findings indicate pure social aggression is uniquely associated with narcissism in both men and women, while pure physical aggression is significantly related to narcissism in men but not women.

The Need to Understand Links Between Narcissism, Shame, and Aggression

On the whole, theory and empirical evidence suggests individuals high in pathological narcissism, especially those whose self-esteem is variable in the absence of external contingencies, are prone to experiencing shame. Additionally, pathologically narcissistic individuals may respond to ego threatening situations and interpersonal frustration with negative affect and aggression. The current dissertation specifically focuses on pathological narcissism as it relates to shame, socially aggressive behaviors, and physically aggressive feelings over time. One psychological construct that may help to better understand how or why narcissistic individuals are shame prone, engage in socially aggressive behaviors, and experience physically aggressive feelings, is perfectionism. The following sections will focus on understanding the possible link between all of them.

Perfectionism

A body of research has established that perfectionism is multidimensional with both intrapersonal and interpersonal dimensions (e.g., Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991) and more adaptive (healthy) and maladaptive (unhealthy) components (e.g., Bieling, Israeli, & Antony, 2004; Rice & Ashby, 2007;

Slaney, Rice, Mobley, Trippi, & Ashby, 2001). Below two multidimensional conceptualizations of perfectionism; namely, trait perfectionism and perfectionistic self-presentation are described in detail. Also included is a brief discussion of the importance of moving beyond studying perfectionism as a stable personality disposition but also as a dynamic construct.

Trait Perfectionism. According to one of the most widely studied models of perfectionism (Hewitt & Flett, 1991), perfectionism is a trait consisting of three distinct dimensions: self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. *Self-oriented perfectionism* is an intrapersonal dimension that reflects the tendency to set exceedingly high expectations and unrealistic standards for oneself. Self-oriented perfectionists are highly critical of themselves if they do not live up to their own expectations of perfection. In contrast, *other-oriented perfectionism* is an interpersonal dimension that reflects the tendency to set exceedingly high expectations and unrealistic standards for others. Other oriented perfectionists are highly critical toward individuals they believe have not lived up to their perfectionistic expectations. *Socially prescribed perfectionism* is an interpersonal dimension that reflects the perception that others set exceedingly high expectations and unrealistic standards for the self. Socially prescribed perfectionists are concerned that others will be highly critical of them if they have not lived up to others' expectations of perfection.

Perfectionistic Self-presentation. Multidimensional conceptualizations of perfectionism have expanded to include perfectionistic self-presentation (Hewitt et al., 2003). This construct is seen from a regulatory focus theory on how people tend to engage in self-regulation with either a promotion focus or with a prevention focus

(Higgins, 1998). Whereas trait perfectionism involves the need to *be* perfect, perfectionistic self-presentation is an interpersonal style that involves the need to *appear* perfect to others as a form of impression management. Accordingly, there are two central motivational components to perfectionistic self-presentation that entails fostering others' impression of oneself as perfect and precluding others' impression of oneself as imperfect.

Perfectionistic self-presentation is comprised of three dimensions: perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection. *Perfectionistic self-promotion* is promotion focused and reflects the need to impress others and appear flawless by demonstrating an image of oneself as being perfectly successful, intelligent, socially competent, etc. in all aspects of life. Conversely, the latter two dimensions of perfectionistic self-presentation are prevention focused and involve the concealment of one's perceived imperfections or flaws to others. More specifically, *nondisplay of imperfection* reflects the need to conceal or avoid showing imperfect behaviors while *nondisclosure of imperfection* reflects the need to avoid verbal disclosure or admission of mistakes or imperfection. Hewitt and colleagues (2003) posited that perfectionistic self-presentational strategies may be a form of self-esteem regulation motivated by feelings of inadequacy and fears of interpersonal rejection.

Although overlap between trait perfectionism and perfectionistic self-presentation exists, they are still conceptually and empirically distinct from one another (Hewitt et al., 2003). A number of empirical studies show perfectionism traits and perfectionistic self-presentation styles converge and diverge in relation to psychopathology, emotional distress, maladaptive outcomes, and interpersonal problems (e.g., Chen, Hewitt, & Flett,

2015; Egan, Wade, & Shafran, 2011; Hewitt & Flett, 1991; Hewitt et al., 2003; Miller & Vaillancourt, 2007; Stoeber, Noland, Mawenu, Henderson, & Kent, 2017; Stoeber, Schneider, Hussain, & Matthews, 2014). Moreover, facets of perfectionistic self-presentation predict various outcomes above and beyond trait perfectionism (e.g., self-esteem, depression, and anxiety; Hewitt et al., 2003).

Perfectionism as a Dynamic Construct. According to contemporary trait theories (e.g., Fleeson, 2001), individual differences in thoughts, feelings, and behaviors (e.g., personality traits) include a stable component and a variable component. Accordingly, traits can be conceptualized and quantified as the density distribution of one's states (e.g., transient thoughts, feelings, behaviors) across different situations and time (Fleeson, 2001; Fleeson & Jayawickreme, 2015). This is important because associations observed at the between-person level (trait level) may not be reflective of processes occurring within individuals (state level) in daily life (for review, see Hamaker, 2012; Molenaar, 2004).

Perfectionism has largely been perceived as a relatively stable personality characteristic across time and situation (e.g., Cox & Enns, 2003; Frost et al., 1990; Hewitt & Flett, 1991; Rice, Richardson, & Clark, 2007). However, short-term longitudinal research has increasingly begun to challenge this supposition by demonstrating perfectionism also exhibits state-like variability over time (e.g., days, weeks; Boone, Soenens, Vansteenkiste, & Braet, 2012; Mackinnon, Kehayes, Leonard, Fraser, & Stewart, 2017; Mackinnon, Ray, Firth, & O'Connor, 2019) and across life domains within the person (Franche & Gaudreau, 2016; Levine & Milyavskaya, 2018). Moreover, it is critical to consider within-person changes in perfectionism dimensions because they

predict various outcomes such as well-being (Mackinnon et al., 2017) and social anxiety (Mackinnon, Battista, Sherry, & Stewart, 2014). Studying perfectionism as a dynamic construct is particularly relevant when considering there are theories suggesting perfectionism may be crucial for self, emotion, and/or behavior regulation in narcissistic pathology (e.g., Ronningstam, 2010; Schoenleber and Berenbaum 2012; Sorotzkin, 1985). The current dissertation examines the dynamic nature of perfectionism in the context of shame, aggression, and narcissism.

Trait Perfectionism and Shame

According to Tangney (2002), perfectionists may be especially susceptible to feelings of shame because they are constantly engaged in the process of evaluation. However, the likelihood of experiencing shame may depend on who is the source and object of perfectionistic expectations (self/internal vs. other/external). The following subsection highlights findings from cross-sectional studies examining how the three perfectionism traits of Hewitt and Flett's (1991) model of perfectionism relate to shame.

Cross-sectional Findings on Trait Perfectionism and Shame. Cross-sectional research consistently show socially prescribed perfectionism positively and moderately correlates with proneness to shame (r = 0.15 - 0.23, $p < 0.05$; r = 0.26 - 0.33, $p < 0.001$; Fee & Tangney, 2000; Tangney, 2002), state shame (r = 0.38, $p < 0.01$; Chen et al., 2015), and feelings of shame (r = .26, $p < 0.01$; Klibert, Langhinrichsen-Rohling, & Saito, 2005). Moreover, some studies found the relationship between socially prescribed perfectionism and shame-proneness remains when guilt is partialled out from shame (r = 0.20 - 0.26, $p < 0.05$ and r = 0.30 - 0.33, $p < 0.001$; Tangney, 2002). Conversely, relations between self-oriented perfectionism and shame seem mixed. Some studies

indicate self-oriented perfectionism has small to moderate positive correlations with shame-proneness ($r = 0.14 - 0.27$, $p < 0.05$; Fee & Tangney, 2000; Tangney, 2002); however, when guilt is partialled out from shame, this relationship no longer remained significant (Fee & Tangney, 2000; Tangney, 2002). Moreover, self-oriented perfectionism has a non-significant association with state shame (Chen et al., 2015) and feelings of shame (Klibert et al., 2005).

Moreover, in a sample of undergraduate students, Stoeber, Kempe, and Keogh (2008) found that all facets of self-oriented perfectionism (i.e., perfectionistic striving and importance of being perfect) and all facets of socially prescribed perfectionism (i.e., others' high standards and conditional acceptance) significantly and positively correlate with feelings of shame after failure. When examining whether any of the four facets of perfectionism moderate the association between shame and the task performance condition (failure vs. success), they found only conditional acceptance—that is, the belief approval from others is contingent on being perfect—significantly predicts higher levels of shame after failure (but not success). Conditional acceptance also predicts lower levels of pride after success and failure; whereas, perfectionistic striving relates to higher levels of pride after success. Accordingly, Stoeber and colleagues (2008) note that conditional acceptance seems to be an especially maladaptive characteristic of perfectionism. Unfortunately, no measure of other-oriented perfectionism was included in their study.

Nevertheless, past cross-sectional studies found other-oriented perfectionism is negatively as well as unrelated to shame-proneness even when guilt is partialled out from shame (Fee & Tangney, 2000; Tangney, 2002) and state shame (Chen et al., 2015). This is not surprising given that empirical studies demonstrate other-oriented perfectionism is

a “dark” form of perfectionism associated with narcissistic and antisocial personality characteristics, including uncaring traits, aggressive humor, an individualistic orientation, positive self-regard, low interest in others, and low prosocial orientation (Stoeber, 2014a, 2015). Altogether, research findings suggest socially prescribed perfectionism is particularly important to the experience of shame, whereas other-oriented perfectionism and self-oriented perfectionism appear generally unrelated to shame.

Perfectionistic Self-Presentation and Shame

According to Schoenleber and Berenbaum (2012), Perfectionistic Behaviors—defined “as actions designed to either attain excessively high standards or, at least, avoid exposure of imperfections” (p. 7)—can be adaptive when moderately used by individuals because they could motivate people to exert greater effort in accomplishing their goals. However, these behaviors become maladaptive when used inappropriately or in great excess, which can contribute to the development and/or maintenance of personality pathology (Schoenleber & Berenbaum, 2012). They suggest Prevention strategies may be used defensively to reduce the likelihood of experiencing shame relative to other shame regulation strategies such as Escape (used to lessen existing or impending shame) or Aggression (used after onset of shame, redirects shame into anger toward self or others). Perfectionistic self-presentation styles are examples of prevention shame regulation that individuals engage in to avoid or reduce the likelihood of shame that may arise when faced with situations that might expose their flaws, mistakes, and imperfections (Schoenleber & Berenbaum, 2012).

Other researchers report that perfectionistic self-presentation styles are self-esteem regulation strategies that individuals use to protect themselves from feelings of

shame and inadequacy in interpersonal domains (Hewitt et al., 2003; Peterson, 2003). Individuals may falsely believe that presenting oneself as flawless or concealing one's perceived personal imperfections will foster respect, approval, and acceptance from others (Hewitt et al., 2003). However, it is possible the opposite may occur. Empirical studies examining associations between perfectionistic self-presentation and shame is scant. One cross-sectional study found that all three forms of perfectionistic self-presentational styles (i.e., perfectionistic self-promotion, perfectionistic nondisplay of imperfections, and perfectionistic nondisclosure of imperfections) are positively and moderately associated with state shame ($r = 0.28 – 0.36$, $p < 0.01$; Chen et al., 2015). Thus, for some individuals, hiding one's imperfections and flaws or actively promoting oneself as perfect may be an ineffective or failed shame-regulatory strategy, although this has yet to be empirically tested.

General Considerations of the Literature on Multidimensional Perfectionism and Shame

Individuals higher in maladaptive perfectionism are prone to experiencing increased daily negative affect (e.g., shame, anger) in response to everyday stressors that involve personal failure, criticism from others, and loss of control (Dunkley, Zuroff, & Blankstein, 2003). In fact, individuals high in maladaptive perfectionism are found to engage in ineffective coping strategies for reducing distress compared to individuals lower in maladaptive perfectionism, likely prolonging their experience of negative affect (Dunkley et al., 2003). Taken together, one might expect that individuals engaging in perfectionistic self-presentation behaviors are more likely to experience negative affect such as shame than those reporting fewer perfectionistic self-presentation behaviors.

Furthermore, the pattern of relationships between facets of trait perfectionism and shame might be understood within an internalizing and externalizing framework. For instance, other-oriented perfectionism most closely relates to externalizing (outward-focused) problems rather than internalizing (inward focused) problems (e.g., Hewitt & Flett, 1991; Stoeber, 2014a, 2015). Shame reflects negative self-evaluation in conjunction with fears of social threats and given that other-oriented perfectionists are more concerned with others being perfect rather than themselves, it is expected that other-oriented perfectionists would not experience feelings of shame. In contrast, socially prescribed perfectionists likely experience feelings of shame because they are concerned with being perfect in the eyes of others given their need for acceptance and approval by others (Hewitt & Flett, 1991). Research demonstrates self-oriented perfectionism can be adaptive and thus high self-standards may motivate a person to achieve success and promote self-control, thereby providing some degree of protection from internalizing problems (Klibert et al., 2005). In this regard, it is expected that self-oriented perfectionists would not experience feelings of shame despite high self-expectations and standards are inner-directed. It would seem worthwhile to examine whether these patterns exist at the within-person level given perfectionism is state-like and malleable (e.g., Boone et al., 2012) and shame is a momentary emotion (not only stable over time) (Scott et al., 2015), but this has yet to be explored.

Perfectionism and Aggression

Preliminary research suggests maladaptive perfectionism is associated with aggression. A study by Chester, Merwin, and DeWall (2014) shows that individuals with maladaptive perfectionism appear to react with greater aggression towards others after

receiving negative feedback, perhaps using aggression to improve mood. Yet, research on perfectionism dimensions and aggression is limited more generally. This next subsection provides an overview of extant research on this topic.

Cross-Sectional Findings on Trait Perfectionism and Aggression. In terms of Hewitt and Flett's (1991) model of perfectionism, findings from one study show participants characterized by high levels in both socially prescribed perfectionism and self-oriented perfectionism (i.e., "mixed perfectionism") score significantly higher in physical and verbal aggression than participants characterized by low levels in both socially prescribed perfectionism and self-oriented perfectionism (i.e., "non-perfectionism") (Vicent et al., 2017). Moreover, compared to participants characterized by high levels of pure self-oriented perfectionism, participants characterized by high levels in pure socially prescribed perfectionism score significantly higher in all aggression related constructs (hostility, anger, physical aggression) except for verbal aggression, where no significant differences were found. Unfortunately, no measure of other-oriented perfectionism was included and correlations between specific perfectionism dimensions and aggression were not examined.

Nonetheless, some of these shortcomings are addressed by a study examining how Hewitt and Flett's three dimensions of trait perfectionism relate to social disconnection and interpersonal hostility, thereby including measures of different forms of aggression (Stoeber et al., 2017). Following bivariate correlational analysis, Stoeber and colleagues (2017) found other-oriented perfectionism positively relates to verbal aggression (r = 0.23, $p < 0.001$), physical aggression ($r = 0.20$, $p < 0.001$), anger ($r = 0.19$, $p < 0.01$), hostility ($r = 0.14$, $p < 0.01$), and aggressive feelings when frustrated ($r = 0.21$, $p < 0.001$)

and provoked ($r = 0.21$, $p < 0.001$). Meanwhile, socially prescribed perfectionism positively relates to all these aggression-related constructs with the exception of verbal aggression, which is non-significant ($r = 0.05$; $r = 0.17$, $p < 0.001$; $r = 0.22$, $p < 0.001$; $r = 0.37$, $p < 0.001$; $r = 0.23$, $p < 0.001$; $r = 0.17$, $p < 0.001$, respectively). These patterns mostly hold for the two perfectionism dimensions when examining partial correlations controlling for respective perfectionism traits (with the exception that the positive correlation between other-oriented perfectionism and hostility became nonsignificant when controlling for self-oriented perfectionism and socially prescribed perfectionism). With regards to self-oriented perfectionism, bivariate correlations show that self-oriented perfectionism significantly and positively relates to verbal aggression ($r = 0.14$, $p < 0.01$), hostility ($r = 0.18$, $p < 0.001$), and aggressive feelings when frustrated ($r = 0.11$, $p < 0.05$) and provoked ($r = 0.11$, $p < 0.05$). However, when controlling for the two other perfectionism dimensions, self-oriented perfectionism became significantly negatively associated with physical aggression ($r = -0.16$, $p < 0.01$) and no longer significantly associated with verbal aggression, hostility, and aggressive feelings when frustrated and provoked.

Taken together, findings from Stoeber et al. (2017)'s study suggest that individuals with high levels of other-oriented perfectionism and high levels of socially prescribed perfectionism exhibit characteristics indicative of social disconnection and interpersonal hostility. Conversely, individuals with high levels of self-oriented perfectionism exhibit characteristics suggestive of social connection and low aggression. Thus, interpersonal aspects of trait perfectionism (i.e., other-oriented perfectionism and socially prescribed perfectionism) seem to be more relevant to aggression compared to an

intrapersonal dimension of perfectionism (self-oriented perfectionism). This seems to make sense when one considers how externalizing behaviors (e.g., aggression) tend to be directed outward towards others, while internalizing behaviors are inward directed (e.g., depression, anxiety, social withdrawal) (Krueger, 1999).

General Considerations of the Literature on Multidimensional Perfectionism and Aggression

It is of interest to note that socially prescribed perfectionists and other-oriented perfectionists show a somewhat different expression of aggressive behaviors. Specifically, findings from cross-sectional studies described above appear to indicate that socially prescribed perfectionism is linked with physical aggression but not verbal aggression, whereas other-oriented perfectionism is linked with both physical and verbal aggression. Research shows that of the three facets of trait perfectionism, only socially prescribed perfectionism is associated with interpersonal behaviors such as fears of negative evaluation by others and strong need for approval (e.g., Hewitt & Flett, 1991), and is characterized by a pattern of social skills characterized by low emotional expressiveness, high emotional control, and high social sensitivity (Flett, Hewitt, & De Rosa, 1996).

Perhaps then individuals with high levels of socially prescribed perfectionism might not report engaging in verbally aggressive behaviors because they are overly sensitive to social feedback and do not express emotionality for fear of social disapproval. Rather they may use physical aggression because physical aggression may serve as a means to avoid or terminate the experience of vulnerable emotions such as sadness and anxiety but not anger (Jakupcak, 2003). Given that relational/social

aggression overlaps with verbal aggression (see Archer & Coyne, 2005), it is anticipated that socially prescribed perfectionism would be unrelated to socially aggressive behaviors, but this has yet to be empirically tested. From an internalizing and externalizing framework, self-oriented perfectionism is not expected to relate to aggression because aggression is an outward directed interpersonal behavior. Conversely, it is expected that other-oriented perfectionism and socially prescribed perfectionism relate to some form of aggression because both of these constructs involve others as the subject of perfectionism.

What is also less clear is how perfectionistic presentation styles (i.e., perfectionistic self-promotion, nondisplay of imperfection, nondisclosure of imperfection) relate to aggressive behaviors. One might expect all of them to be positively associated with aggression given their interpersonal nature. Also, given emerging evidence that maladaptive perfectionism is related to emotion dysregulation (Chester et al., 2014), perhaps aggression is one consequence of the failure to self-regulate via perfectionistic self-presentation. However, no studies have examined associations between perfectionistic self-presentational styles and aggressive behaviors (e.g., physical, relational aggression) either from a cross-sectional or longitudinal perspective.

From the literature reviewed thus far, it is worth considering that narcissistic individuals may use perfectionism for self-regulatory purposes in response to ego-threat and as a means to ward off feelings of inferiority, shame, depression, and or anxiety (Pincus et al., 2014; Pincus & Wright, in press; Ronningstam, 2010, 2011). To help illuminate why this might be the case, the next section provides some theoretical insights

and empirical investigations regarding the relationship between narcissism and perfectionism.

The Role of Perfectionism in Narcissism

Theorists have long observed that narcissistic individuals expect perfection from themselves and from others (e.g., Akhtar & Thompson, 1982; Freud, 1957; Millon & Davis, 1996; Raskin & Terry, 1988). Because narcissistic individuals derive their positive sense of self from others, they may experience anger when idealized others fail to live up to their unrealistic expectations and standards as the failures of others may be perceived as a threat to the narcissistic individual's sense of superiority (Beck, Freeman, & Davis, 2004; Kohut, 1972; Millon & Davis, 2000). Intense anger and hostility expressed as "narcissistic rage" arises from the need to bolster their fragile self and defend against threatening and intolerable feelings (e.g., shame, humiliation, powerlessness) stemming from narcissistic injury (Kohut, 1972).

Accordingly, narcissistic individuals may blatantly promote themselves as perfect to protect their fragile self-esteem and validate their grandiose self-image (Sorotzkin, 1985); otherwise, they experience profound shame and narcissistic rage for not living up to their grandiose standards (Kohut, 1972). As Sorotzkin (1985) points out, "the disturbance in self-esteem is the *cause* of perfectionism and not the price" (p. 567). Some contemporary theorists further support the relationship between narcissism and perfectionism. Ronningstam (2010) notes that perfectionism is important for emotional regulation, such that, narcissistic individuals strive to meet inordinately high standards to avert failures that may evoke feelings of incompetence and shame, and possible suicidality. However, excessive perfectionism (e.g., hiding any flaws or needs) and a

grandiose sense of entitlement and expectations of self and others may also diminish a person's capacity to experience positive reinforcement from work, social interactions, or recreation, which may, in turn, give rise to feelings of shame, depression, social anxiety, nihilism, and/or social withdrawal (Pincus et al., 2014).

Recent research has shown that a newly validated construct named narcissistic perfectionism, characterized by entitlement, grandiosity, and unrealistically high expectations for others, incrementally predicts anger beyond extant measures of perfectionism and narcissism (Nealis, Sherry, Lee-Baggley, Stewart, & Macneil, 2016). Narcissistic perfectionism has also positively predicted daily conflicts (i.e., aversive social behavior) and daily derogation (i.e., derogatory thoughts about others) above and beyond self-critical perfectionism (Nealis, Sherry, Sherry, Stewart, & Macneil, 2015). Findings from Nealis et al. (2015) suggest that narcissistic perfectionists engage in negative social behaviors when others fail to meet their expectations. Hence, anger and aggression appear to be prominent affective and behavioral experiences of narcissistic perfectionists. The following subsections provide an overview of cross-sectional and meta-analytic studies investigating associations between multidimensional perfectionism (here, trait perfectionism and perfectionistic self-presentation) and narcissism (here, trait narcissism and pathological narcissism).

Cross-sectional Findings on Trait Perfectionism and Trait Narcissism. Most empirical studies on narcissism and perfectionism have focused on trait perfectionism (i.e., self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism) as it relates to grandiose aspects of narcissism (Flett, Sherry, Hewitt, & Nepon, 2014; Smith, Sherry, & Saklofske, 2018). Several cross-sectional studies have

demonstrated that other-oriented perfectionism has a unique positive relationship with narcissistic personality traits when controlling for other perfectionism dimensions (r = 0.17 – 0.33, $p < 0.01$; Sherry, Gralnick, Hewitt, Sherry, & Flett, 2014; Stoeber, 2014a). In a study investigating how the three facets of trait perfectionism predict the DSM-5 Section III Alternative Model for Personality Disorders maladaptive personality traits, Stoeber (2014b) found that only other-oriented perfectionism positively predicted both grandiosity ($r = 0.34$, $p < 0.001$) and attention seeking ($r = 0.20$, $p < 0.001$), two maladaptive personality traits characteristic of NPD (APA, 2013). In addition, other-oriented perfectionism ($r = 0.12$, $p < 0.01$) and socially prescribed perfectionism (r = 0.18, $p < 0.001$) (but not self-oriented perfectionism) significantly positively predicted DSM-IV/5 Section II Cluster B personality pathology (i.e., dramatic, emotional, and erratic traits, including narcissistic, antisocial, borderline, and histrionic personality disorders) after controlling for gender and all facets of perfectionism dimensions, which includes trait perfectionism and perfectionistic self-presentation (Sherry, Hewitt, Flett, Lee-Baggley, & Hall, 2007). Lastly, recent research shows that depressed patients with NPD exhibit significantly more elevated levels of self-oriented perfectionism and socially proscribed perfectionism compared to a depressed group without a personality disorder (Fjermestad-Noll et al., 2020). While the NPD group endorsed moderately elevated levels of other-oriented perfectionism, there were no differences between the NPD group and the group without a personality disorder. Altogether, empirical evidence shows that other-oriented trait perfectionism is most consistently positively associated with narcissism.

Cross-sectional Findings on Trait Perfectionism and Pathological Narcissism. More recent investigations have examined whether perfectionistic traits differentially relate to more pathological forms of narcissism, particularly narcissistic grandiosity and narcissistic vulnerability. Flett and colleagues (2014) found in two samples that self-oriented perfectionism and socially prescribed perfectionism were both positively associated with both forms of pathological narcissism, but other-oriented perfectionism showed mixed relations with narcissistic grandiosity and was unrelated to narcissistic vulnerability. Moreover, Stoeber, Sherry, and Nealis (2015) conducted an exploratory factor analysis to examine if facets of narcissism from multiple measures conform to the two-factor structure representing narcissistic grandiosity and narcissistic vulnerability. Results suggested they do. Stoeber et al. (2015) then found that after controlling for the overlap between the three facets of trait perfectionism, other-oriented perfectionism was predominately associated with narcissistic grandiosity, while socially prescribed perfectionism was predominately associated with narcissistic vulnerability. Self-oriented perfectionism was unrelated to narcissistic grandiosity but showed positive associations with individual facets of narcissistic vulnerability.

Meta-analytic Findings on Trait Perfectionism and Narcissism. In a recent meta-analysis taking into account various measures of narcissism, Smith and colleagues (2016) found that after controlling for overlap among all perfectionism dimensions, self-oriented perfectionism and other-oriented perfectionism are most closely associated with narcissistic grandiosity, whereas socially prescribed perfectionism is most closely associated with narcissistic vulnerability. In sum, other-oriented perfectionism appears to be a strong correlate of narcissistic grandiosity, socially prescribed perfectionism appears

to be a strong correlate of narcissistic vulnerability, and self-oriented perfectionism yields mixed results in relation to narcissistic grandiosity.

Cross-sectional Findings on Perfectionistic Self-presentation and Trait Narcissism. There is also some research on the links between narcissism and perfectionistic self-presentation styles. Empirical studies have shown that normal trait narcissism is positively and uniquely associated with perfectionistic self-promotion (r = 0.31- 0.34, $p < 0.001$; Casale, Fioravanti, Rugai, Flett, & Hewitt, 2016; Hewitt et al., 2003; Sherry et al., 2014). Sherry and colleagues (2014) found nondisplay of imperfection was negatively and uniquely related to narcissism (r = - 0.34, $p < 0.01$) controlling for other perfectionism dimensions. The researchers propose that this unhypothesized association may suggest a negative suppressor effect. Alternatively, the finding could suggest that narcissists may be less concerned about behaving in a perfect manner than one would expect. Nevertheless, replication is needed. Furthermore, of the three facets of perfectionistic self-presentation, only perfectionistic self-promotion (r = 0.24, $p < 0.001$) significantly predicted DSM-IV/5 Section II Cluster B personality pathology after controlling for gender and all perfectionism dimensions (i.e., trait perfectionism and perfectionistic self-presentation) (Sherry et al., 2007). These findings suggest the need to promote the image of oneself as flawless to others is especially salient to narcissistic individuals.

Cross-sectional Findings on Perfectionistic Self-presentation and Pathological Narcissism. In terms of pathological narcissism, all three facets of perfectionistic self-presentation have demonstrated moderate to strong, positive correlations with narcissistic grandiosity (r = 0.39 – 0.59, $p < 0.01$) and narcissistic

vulnerability ($r = 0.50 – 0.63$, $p < 0.01$) (Flett et al., 2014). Casale et al. (2016) found the three perfectionistic self-presentation dimensions positively predicted narcissistic vulnerability. However, perfectionistic self-promotion no longer significantly predicted narcissistic vulnerability after controlling for all perfectionistic self-presentation dimensions and gender.

Meta-analytic Findings on Perfectionistic Self-presentation and Pathological Narcissism. Lastly, results from Smith and colleagues' (2016) meta-analysis revealed that after controlling for the overlap among all perfectionism dimensions, perfectionistic self-promotion remained positively (and has a close to moderate) correlation with narcissistic grandiosity; meanwhile, the relation between nondisplay of imperfection and narcissistic grandiosity went from a small nonsignificant zero-order relationship to a small negative significant partial relationship. The stronger positive association between perfectionistic self-promotion and narcissistic vulnerability also remained when controlling for all perfectionism dimensions. However, the relationship between nondisclosure of imperfection and narcissistic vulnerability went from a strong positive significant zero-order correlation to a small nonsignificant partial correlation. Moreover, nondisclosure of imperfection's strong positive significant bivariate relationship with narcissistic vulnerability became small but remained positive and significant when accounting for all perfectionism dimensions. Taken together, the most consistent finding across studies is that perfectionistic self-promotion is closely linked to both normal and pathological forms of narcissism.

General Considerations of the Literature on Multidimensional Perfectionism, Narcissism, Shame, and Aggression.

Recall that pathological narcissism "involves significant regulatory deficits and maladaptive strategies to cope with disappointments and threats to a positive self-image" (Pincus & Lukowitsky, 2010, p. 426). However, the use of certain coping strategies may instead backfire and reinforce or lead to greater problems for the narcissist given their hypersensitivity to perceived ego threat and interpersonal frustrations. In this regard, it is plausible that individuals high in pathological narcissism are prone to emotional (e.g., shame) as well as behavioral (e.g., aggressive) problems, because of, at least in part, their very engagement in certain maladaptive perfectionistic behaviors or perfectionistic self-regulatory strategies. For instance, highly narcissistic individuals may engage in socially aggressive behaviors and physically aggressive urges partly because they demand exceedingly high and unrealistic standards from others (other-oriented perfectionism). This would be unsurprising given other-oriented perfectionism positively relates narcissism, antagonism, and hostility (Stoeber, 2014b). Yet, individuals high in pathological narcissism may not experience shame because, at least partly, their perfectionistic expectations are other directed, thereby diverting their attention away from engaging in global negative self-evaluation. Such questions largely remain unanswered.

More directly speaking, an internalizing and externalizing framework might help put into context the expected pattern of within-person associations between perfectionism and aggression/shame, and it is possible pathological narcissism might influence the direction of these experiences. An example is as follows. As previously discussed, state-like processes of promotion focus self-presentation and prevention focus self-presentation are regulatory strategies that individuals might use to reduce the likelihood of experiencing emotional and behavioral problems over time. More specifically, promotion

focused perfectionistic self-presentation is a regulatory strategy that is outward focused. That is, it involves actively promoting the image of perfection to others, which empirical studies (discussed above) indicate is especially salient to narcissism. Given self-promotional behavior is positively related to externalizing problems (e.g., relational aggression, antisocial behaviors; Abell & Brewer, 2014; Carpenter, 2012) and individuals with personality pathology might use other-directed behaviors to down-regulate shame (Schoenleber and Berenbaum, 2012), it is anticipated that individuals with high levels of pathological narcissism might experience less shame during periods of time they also engage in this perfectionistic self-presentation strategy. Put simply, pathological narcissism might *mitigate* rather than exacerbate the experience of shame when they engage in promotion focus perfectionistic strategies. This may partially speak to theories suggesting the need of narcissists to promote themselves as perfect in order to defend against intolerable feelings (e.g., shame; Kohut, 1972).

Conversely, prevention focus perfectionistic self-presentation is a regulatory strategy that is inward focused. That is, it involves concealing and avoiding verbally disclosing or behaviorally displaying imperfections to others. Given passive coping and self-concealment behaviors are associated with internalizing problems (Compass, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Ichiyama et al., 1993), which in it of itself is characterized by negative affect and mood disturbance, it is anticipated that individuals with high levels of pathological narcissism might experience more shame during periods of time they also engage in prevention focused perfectionistic self-presentation strategy. Put simply, pathological narcissism might *heighten* rather than ameliorate the experience of vulnerable emotions such as shame when they engage in

prevention focus perfectionistic strategies. This dissertation seeks to address these questions in two important ways discussed below.

Chapter 2

AIMS AND HYPOTHESES

The Present Study: Aim 1

The first aim of this dissertation is to expand prior work on narcissism and perfectionism by using a longitudinal study design to examine whether perfectionism dimensions (assessed once a week for two months) may help at least partly explain why individuals higher in pathological narcissism (assessed at Time 1) might experience shame, socially aggressive behaviors, and physically aggressive feelings over time (outcomes are also assessed weekly over two-month period). Thus, to address this research question, separate mediational models were used to test the effects of pathological narcissism (i.e., independent variable) on average levels of weekly shame, social aggression, and physically aggressive feelings (i.e., outcome variables) via average levels of different perfectionism dimensions (i.e., mediators) at weekly levels (self-oriented perfectionism, other-oriented perfectionism, socially prescribed perfectionism, perfectionistic self-promotion, nondisclosure of imperfection, and nondisplay of imperfection).

Taking into account theory and previous studies, the following mediation hypotheses were proposed and summarized in Table 1:

Hypothesis 1 (H1): Pathological narcissism will be positively related to average levels of shame (H1a). Moreover, average levels of weekly promotion focused

perfectionistic self-presentation (perfectionistic self-promotion) (H1b) and average levels of weekly prevention focused perfectionistic self-presentation (nondisclosure and nondisplay of imperfection) (H1c) will each at least partially mediate the relationship between pathological narcissism and average levels of weekly shame.

Hypothesis 2 (H2): Pathological narcissism will be positively related to average levels of physically aggressive feelings (H2a). Moreover, average levels of weekly promotion focused perfectionistic self-presentation (perfectionistic self-promotion) (H2b) and average levels of weekly prevention focused perfectionistic self-presentation (nondisclosure and nondisplay of imperfection) (H2c) will each at least partially mediate the relationship between pathological narcissism and average levels of weekly physical aggressive feelings.

Hypothesis 3 (H3): Pathological narcissism will be positively related to average levels of weekly socially aggressive behaviors (H3a). Furthermore, average levels of weekly promotion focused perfectionistic self-presentation (perfectionistic self-promotion) (H3b) and average levels of weekly prevention focused perfectionistic self-presentation (nondisclosure and nondisplay of imperfection) (H3c) will each at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors.

Hypothesis 4 (H4): Average level of weekly socially prescribed perfectionism (SPP) is expected to at least partially mediate the relationship between pathological narcissism and average levels of weekly shame (H4a). In contrast, average levels of weekly self-oriented perfectionism (SOP) (H4b) and average levels of other-oriented perfectionism (OOP) (H4c) will each be ruled out as a mediator of the association

between pathological narcissism and average levels of weekly shame given that average levels of weekly shame is expected to be unrelated to average levels of weekly SOP and OOP.

Hypothesis 5 (H5): Average levels of socially prescribed perfectionism (SPP) (H5a) and average levels of weekly other-oriented perfectionism (OOP) (H5b) are each expected to at least partially mediate the association between pathological narcissism and average levels of weekly physically aggressive feelings. In contrast, average levels of weekly self-oriented perfectionism (SOP) will be ruled out as a mediator of the association between pathological narcissism and average levels of weekly physically aggressive feelings given that average levels of weekly physically aggressive feelings is expected to be unrelated to average levels of weekly SOP (H5c).

Hypothesis 6 (H6): Average levels of weekly other-oriented perfectionism (OOP) is expected to at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors (H6a). Conversely, average levels of weekly self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP) will each be ruled out as a mediator of the association between pathological narcissism and weekly socially aggressive behaviors given that average levels of socially aggressive behaviors is expected to be unrelated to average levels of weekly SOP (H6b) and SPP (H6c).

The Present Study: Aim 2

The second aim of this dissertation is to examine whether pathological narcissism might exacerbate or mitigate weekly within-person experiences of perfectionism/perfectionistic self-presentation styles and shame, socially aggressive

behaviors, and physically aggressive feelings over a two-month period. Such associations would support the conceptualization of perfectionism as a regulatory mechanism relied upon by narcissistic individuals (Ronningstam, 2010). Moreover, given empirical work demonstrating that maladaptive perfectionism is related to emotion dysregulation (Malivoire et al., 2019), there is further reason to examine whether in fact weekly perfectionism and weekly perfectionistic self-presentation behaviors have harmful and/or helpful effects in individuals with higher levels of pathological narcissism. To address this research question, a moderation model is used because pathological narcissism (i.e., moderator) is seen as influencing the strength and direction of weekly within-person associations between the constructs of interest over time, instead of serving as the link between them (the latter of which is in line with a mediation model). Based on theory and the literature described above, the following were hypothesized and summarized in Table 2:

Hypothesis 7 (H7): There will be a significant random effect for within person associations between weekly promotion focused perfectionistic self-presentation (perfectionistic self-promotion) and weekly shame (H7a.1). Additionally, pathological narcissism is expected to *mitigate* the positive association between weekly promotion focused perfectionistic self-presentation and weekly shame (H7a.2). That is, during weeks' when the prototypical participant reports more promotion focused perfectionistic self-presentation than usual, they experience more shame. This effect will be weaker in individuals high in pathological narcissism.

There will also be a significant random effect for within person associations between weekly prevention focused perfectionistic self-presentation (nondisclosure and

nondisplay imperfection) and weekly shame (H7b.1). Pathological narcissism will *amplify* the positive association between weekly prevention focused perfectionistic self-presentation and weekly shame (H7b.2). That is, on weeks' when the prototypical participant reports more prevention focused perfectionistic self-presentation than usual, they experience more shame. This effect will be stronger in individuals high in pathological narcissism.

Hypothesis 8 (H8): There will be a significant random effect for within person associations between weekly promotion focused perfectionistic self-presentation (perfectionistic self-promotion) and weekly physically aggressive behaviors (H8a.1), as well as between weekly prevention focused perfectionistic self-presentation (nondisclosure and nondisplay of imperfection) and weekly physically aggressive feelings (H8b.1). Moreover, pathological narcissism will *amplify* the positive association between weekly promotion focused perfectionistic self-presentation and weekly physically aggressive feelings (H8a.2), as well as between weekly prevention focused perfectionistic self-presentation and weekly physically aggressive feelings (H8b.2). That is, during weeks' when the prototypical participant reports more promotion focused perfectionistic self-presentation than usual, or prevention focused perfectionistic self-presentation than usual, they experience more physically aggressive feelings. These two effects, considered separately, will be stronger in individuals high in pathological narcissism.

Hypothesis 9 (H9): There will be a significant random effect for within person associations between weekly promotion focused perfectionistic self-presentation (perfectionistic self-promotion) and weekly socially aggressive behaviors (H9a.1), as

well as between weekly prevention focused perfectionistic self-presentation (nondisclosure and nondisplay of imperfection) and weekly socially aggressive behaviors (H9b.1). Moreover, pathological narcissism will *amplify* the positive association between weekly promotion focused perfectionistic self-presentation and weekly socially aggressive behaviors (H9a.2), as well as between weekly prevention focused perfectionistic self-presentation and weekly socially aggressive behaviors (H9b.2). That is, during weeks' when the prototypical participant reports more promotion focused perfectionistic self-presentation than usual, or prevention focused perfectionistic self-presentation than usual, they experience more socially aggressive behaviors. These two effects, considered separately, will be stronger in individuals high in pathological narcissism.

Hypothesis 10 (H10): There will not be a significant random effect for within person associations between weekly self-oriented perfectionism (SOP) and weekly shame (H10a.1) or weekly other-oriented perfectionism (OOP) and weekly shame (H10b.1). Accordingly, there will be no moderation effect of pathological narcissism on weekly SOP and weekly shame (H10a.2) or weekly OOP and weekly shame (H10.b2). In contrast, there will also be a significant random effect for within person associations between weekly socially prescribed perfectionism (SPP) and weekly shame (H10c.1). Moreover, pathological narcissism will *amplify* the positive association between weekly SPP and weekly shame (H10c.2). That is, during weeks' when the prototypical participant experiences more SPP than usual, they experience more shame. This effect will be stronger in individuals high in pathological narcissism.

Hypothesis 11 (H11): There will not be a significant random effect for within person associations between weekly self-oriented perfectionism (SOP) and weekly physically aggressive feelings (H11a.1). Accordingly, there will be no moderation effect of pathological narcissism on weekly SOP and weekly physically aggressive feelings (H11a.2). In contrast, there will be a significant random effect for within person associations between weekly socially prescribed perfectionism (SPP) and weekly physically aggressive feelings (H11b.1), as well as weekly OOP and weekly physically aggressive feelings (H11c.1). Pathological narcissism is expected to *amplify* the positive relationship between weekly SPP and weekly physically aggressive feelings (H11b.2), as well as between weekly OOP and weekly physically aggressive feelings (H11c.2). That is, during weeks' when the prototypical participant experiences more SPP than usual, or OOP than usual, they experience more physically aggressive feelings. These two effects, considered separately, will be stronger in individuals high in pathological narcissism.

Hypothesis 12 (H12): There will not be a significant random effect for within person associations between weekly self-oriented perfectionism (SOP) and weekly socially aggressive behaviors (H12a.1) or between weekly socially prescribed perfectionism (SPP) and weekly socially aggressive behaviors (H12.b1). Accordingly, there will be no moderation effect of pathological narcissism on weekly SOP and weekly socially aggressive behaviors (H12a.2) or on weekly SPP and weekly socially aggressive behaviors (H12b.2). In contrast, there will be a significant random effect for within person associations between weekly other-oriented perfectionism (OOP) and weekly socially aggressive behaviors (H12c.1). Pathological narcissism will *amplify* the positive association between weekly OOP and weekly socially aggressive behaviors (H12c.2).

That is, during weeks' when the prototypical participant reports more OOP than usual, they experience more socially aggressive behaviors. This effect will be stronger in individuals high in pathological narcissism.

Chapter 3

METHOD

Participants

This study uses a previously recruited sample of 293 undergraduate students (148 females, 145 males) over the age of 18 from a large university. Twenty-eight participants were excluded from the study due to careless responding on the baseline survey (as assessed by the 8-item Personality Assessment Inventory Infrequency Scale; Morey, 1991). The remaining 265 participants were recruited to complete subsequent surveys on a once a week basis over a period of 8 weeks, of which 235 participants (128 women, 107 men) agreed. This represents the final sample of participants who completed both baseline and weekly measures. An additional 7 participants were excluded from data analyses due to providing fewer than 7 weekly survey reports relevant to this study, described below. Thus, the final sample in this study consisted of 228 participants (125 women, 103 men; *M* age = 18.94, *SD* = 1.65), who were predominately Caucasian (82.5%), Asian American (12.7%), Hispanic (6.6%), African American (2.2%), and other (2.6%). Details of study procedures are described elsewhere (see Dawood & Pincus, 2018).

Baseline Measure

Pathological narcissism. The Pathological Narcissism Inventory (PNI; Pincus, 2013; Pincus et al., 2009) is a 52-item self-report measure of pathological narcissism. The PNI has seven subscales that capture facets of narcissistic grandiosity (exploitativeness, self-sacrificing self-enhancement, grandiose fantasy) and narcissistic vulnerability

(contingent self-esteem, hiding the self, entitlement rage, and devaluing). All items are scored on a 6-point Likert scale ranging from 0 (not at all) to 5 (very much like me), and scores for narcissistic grandiosity and narcissistic vulnerability are computed by averaging all the relevant subscales (Wright et al., 2010). A large body of experimental (e.g., Fetterman & Robinson, 2010), correlational (e.g., Roche, Pincus, Lukowitsky, Ménard, & Conroy, 2013; Wright et al., 2013), neuroscientific (e.g., Mao et al., 2016; Scalabrini et al., 2017), clinical (e.g., Ellison et al., 2013; Morf et al., 2017), longitudinal (e.g., Dawood & Pincus, 2018; Roche, Pincus, Conroy, Hyde, & Ram, 2013), and community (e.g., Kealy et al., 2017; Fossati, Somma, Pincus, Borroni, & Dowgwillo, 2017) research supports the validity of the PNI. In this study, the PNI was administered at baseline and Cronbach's alpha for the pathological narcissism scale was 0.94.

Weekly Measures

Participants completed self-reported measures of perfectionism, perfectionistic self-presentation, shame, and aggression once a week over the 8-week study period. Further details of each questionnaire are provided below.

Perfectionism. The present study included two measures of multidimensional perfectionism. The Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991) is a 45-item measure of trait perfectionism. The MPS consists of three subscales: self-oriented perfectionism (SOP), other-oriented perfectionism (OOP), and socially prescribed perfectionism (SPP). Cox, Enns, and Clara's (2002) 15-item short form of the MPS (5 items per dimension) was used. Sample items include "I tried to be as perfect as I could be" (SOP), "I did not expect a lot from my friends" (OOP, reversed), and "People were too demanding of me" (SPP). The 15-item MPS measure was modified to fit the

needs of the present study in two ways. First, the format of the questionnaire was modified to enable participants to rate on the 7-point Likert scale how much they felt each statement applied to them during the past week, thereby assessing perfectionism at the weekly level. Second, the response format on the 7-point Likert scale was modified from the original questionnaire so that item responses now range from 1 = "not at all like this" (rather than "disagree") to 7 = "very much like this" (rather than "agree"). Positively keyed items were reverse coded and item responses corresponding to each relevant subscale were averaged to assess weekly levels of SOP, OOP, and SPP across the 8-week study period (Cronbach's alphas for these subscales were 0.89, 0.84, 0.86, respectively).

Perfectionistic Self-Presentation. The Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003) is a 27-item measure of perfectionistic self-presentation styles. The PSPS contains three subscales: perfectionistic self-promotion (PSP), nondisclosure of imperfection (NDC), and nondisplay of imperfection (NDP). The PSPS was also modified in three ways to fit the present study's needs. First, the three sample items with the highest factor loading on each subscale, drawn from Hewitt et al (2003)'s factor analysis of the PSPS, were used in this study. Sample items include "I tried to look perfect to others" (PSP), "I hated to make errors in public" (NDP), and "I should always keep my problems to myself" (NDC). Second, the questionnaire's format was modified to allow participants to indicate on the 7-point scale how much they felt each statement was true for them during the past week. Finally, the response format on the 7-point Likert scale was modified from the original questionnaire so that item responses now range from 1 = "not at all like this" (rather than "disagree strongly") to 7 = "very much like

this" (rather than "agree strongly"). Positively keyed items were reverse coded and item responses corresponding to each relevant subscale were averaged to assess weekly levels of promotion focused perfectionistic self-presentation (i.e., PSP) and prevention focused perfectionistic self-presentation (i.e., NPC and NPD) across the 8-week study period. Of note, the two subscales NDC and NDP were averaged together to obtain the overall mean score for prevention focused perfectionistic self-presentation. Cronbach's alpha for promotion focused perfectionistic self-presentation was 0.92 and prevention focused perfectionistic self-presentation was 0.80 across the 8 weeks.

Shame. State shame was assessed using two items (ashamed, disgraceful) from the Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988), consistent with prior research (Dickerson, Kemeny, Aziz, Kim, & Fahey, 2004; Vess, Schlegel, Hicks, & Arndt, 2014). The questionnaire format was modified to allow participants to indicate on a 5-point Likert scale (1= very slight or not at all; 5 = extremely) the degree to which they felt ashamed or disgraceful during the past week. Responses were averaged to assess weekly levels of shame across the 8-week study period (Cronbach's alpha = 0.86).

Aggression. The Subtypes of Antisocial Behavior Questionnaire (STAB; Burt & Donnellan, 2009) is a 32-item self-report measure of three distinct types of antisocial behavior: social aggression, physical aggression, and rule-breaking behavior. Items are endorsed on a 5-point Likert scale ranging from 1 (never) to 5 (nearly all of the time) assessing the frequency of aggressive and rule-breaking behaviors. Following an ecological momentary assessment study by Burt and Donnellan (2010), one item from the STAB related to hitting others was used to measure physical aggression, and two items

related to ignoring and gossiping about others were used to assess for social aggression over the 8-week study period. Moreover, the yes-or-no format of the momentary version of the STAB was modified to ask for ratings of how often participants engaged in socially behaviors or experienced physically aggressive urges during the past week on the 5-point Likert scale (1=never; 5 = nearly all the time). The two items for socially aggressive behaviors were averaged together to assess weekly levels of socially aggressive behaviors across the 8-week study period (Cronbach's alpha = 0.58). It is not possible to calculate Cronbach's alpha for single-item measures and thus the reliability for the single-item scale for weekly levels of physically aggressive feelings across 8-week study period could not be reported.

Data Analysis

Preliminary descriptive statistics and tests of normality were calculated for all study variables. Two of the three continuous dependent variable scales; specifically, shame and physically aggressive feelings (but not social aggression) violated normality assumptions, indicated by high positive skewness (a measure of symmetrical distribution about the mean; skewness = 1.81 for shame and 1.42 for physically aggressive feelings) and high kurtosis (a measure of the data distribution's peakedness and tailness; kurtosis = 2.99 for shame and 1.21 for physically aggressive feelings). Furthermore, the distribution of the data is zero-inflated because a very high number of participants reported very slight to no feelings of shame or no feelings of physical aggression. Figure 1 is a histogram of an example of such distribution using the shame variable. A similar distribution has been observed in daily levels of shame in other empirical studies (Conroy, Ram, Pincus, & Rebar, 2015).

Two-part modeling was used to capture the zero-inflated and highly skewed distribution data as the outcome of two separate processes (Olsen & Schafer, 2001). Each weekly score on shame and physically aggressive feelings were recoded as two separate variables: a binary variable representing the likelihood of a participant reporting feelings of shame or physically aggressive feelings that week (e.g., weeks with no feelings of shame were coded as 0 and weeks with any shameful feelings were coded as 1) and a continuous variable indicating how much the person reported feelings of shame or physical aggression. Moreover, a log transformation was used to normalize the distribution of these data, and a dummy value of "-999" was used to denote missing scores for participants who reported no feelings of shame or physically aggressive feelings for the week. The two-part model provides separate regression coefficients for the binary (zero versus nonzero) and the continuous part of the model. The exponentiated coefficients for the binary regression can be interpreted as odds ratios (e.g., the odds of a person reporting any amount of feelings of shame on a given week), whereas coefficients in the continuous regression were modeled as the degree to which an individual experienced feelings of shame or physically aggressive feelings on weeks when the individual reported experiencing any amount of shameful or physically aggressive feelings.

Multilevel structural equation modeling (MSEM) was used to test study hypotheses. MSEM for longitudinal data combines multilevel modeling (MLM), which offers the ability to handle nested data structure (many repeated observations within each individual), with the advantages of structural equation modeling (e.g., latent variable analysis) (Muthén & Asparouhov, 2011; Sadikaj, Wright, Dunkley, Zuroff, &

Moskowitz, 2019). Similar to MLM, the MSEM method can decompose variables and effects into between-person (e.g., individuals differ from each other in their average levels) and within-person (e.g., the extent to which an individual deviates week-to-week from his or her own average level) components. In this way MSEM takes into account that relationships among variables might differ at the between person (Level 2) and within-person (Level 1) level. In contrast to MLM, MSEM permits outcome variables at Level 2; it treats the between-person component of Level 1 variables as latent; and it allows the test of latent cross-level interactions (i.e., the random slope of a within-person variable is predicted by a between-person variable).

All study analyses were performed with Mplus version 8.2 (Muthén & Muthén, 1998-2017). A major advantage of using Mplus is this program allows for the latent decomposition of weekly variables into their between-person and within-person components. Because repeated weekly observations are nested within persons, the intraclass correlation (ICC) for each weekly variable (i.e., the proportion of total weekly variance due to between-person differences) was examined. Byrne (2011) suggests that ICC values larger than 0.10 and smaller than 0.90 indicate substantive amount of variance both at the between- and within-person level. Additionally, participants whose responses were constant over time on any given weekly variable (i.e., showed zero within-person variation) were automatically excluded from study analyses by the Mplus software.

Moreover, given a two-part model includes a categorical outcome and continuous latent variable, a numerical integration with MLR is needed. This can be handled using a Bayesian estimation method with diffuse (non-informative) priors in Mplus (Depaoli &

Clifton, 2015, Muthén, 2010). The computation was carried out using Markov Chain Monte Carlo with Gibbs sampler. The quality of each model was examined using the posterior predictive *p*-value (PPP). Whereas a PPP of < 0.05 indicates poor model fit, a PPP around 0.50 suggests excellent model fit (Muthén & Asparouhov, 2012). Additionally, all model parameters are considered statistically significant when the 95% credibility intervals (CIs) based on Bayesian MSEM exclude zero. In the present study, MSEM mediation analyses (Preacher, Zhang, & Zyphur, 2011; Preacher, Zyphur, & Zhang, 2010) and MSEM with cross-level moderation effects were tested, described further below.

Mediation. MSEM analyses were used to test whether weekly assessed perfectionism dimensions may help partly explain why individuals higher in pathological narcissism might experience shame, socially aggressive behaviors, and physically aggressive feelings over a two-month period. A 2-1-1 mediation model was considered because the predictor (narcissism) is assessed at Level 2, and both the mediator (perfectionism) and the outcome variable (e.g., shame, social aggression) are assessed at Level 1. An illustrative conceptual example is provided in Figure 2. The mediating effect is also known as an "indirect effect" because it is the effect of a predictor (X) on the outcome (Y) through a mediator (M). In contrast, the effect of X on Y that is not mediated is called the "direct effect". The combination of the indirect and direct effect is known as the "total effect". It is largely agreed that mediation only requires that the indirect effect is significant (Preacher & Hayes, 2008; Zhao, Lynch, & Chen, 2010). According to Zhao and colleagues (2010), an "indirect-only mediation" effect is found when there is a significant indirect effect but no direct effect, whereas "complementary

mediation" is found when the mediated effect and direct effect both exist and point at the same direction. The former term overlaps with Baron and Kenny (1986) "full mediation", whereas the latter term overlaps with Baron and Kenny's "partial mediation". A series of models were tested where each mediator and outcome variable were examined separately. Furthermore, all weekly variables were allowed to covary freely at the between-person and within-person levels in MSEM mediation analyses.

Moderation. MSEM was used to test moderation hypotheses (Preacher et al., 2010), specifically examining whether pathological narcissism might heighten or mitigate weekly within-person experiences of perfectionism/perfectionistic self-presentation behaviors and feelings of shame, socially aggressive behaviors and/or physically aggressive feelings over a 2-month period. The mediation model discussed beforehand was extended to include cross-level interactions. A two-level model was specified where a weekly dimension of time (time-variant) was defined at Level-1, while pathological narcissism (time-invariant) was defined at Level-2. Pathological narcissism was also grand-mean centered, and time was centered so that 0 corresponded to the first week assessment, 1 corresponded to the 2nd week assessment, and so forth up until 7 corresponded to the 8th week assessment. In the within-person component of the model, time was treated as a covariate and the outcome variable (e.g., social aggression) was regressed on time. All weekly variables were allowed to covary freely at the between-person and within-person levels. In addition, the slope of the within-person association (e.g., between perfectionism and social aggression) was specified as random and then this random slope was regressed on pathological narcissism at the between-person level. This effect represents a cross-level interaction (i.e., testing whether pathological narcissism

heightens the impact of perfectionism or perfectionistic self-presentation on certain outcomes (e.g., shame, social aggression). Moreover, the intercept of the outcome variable was regressed on pathological narcissism at the between-person level, thereby allowing us to test whether the tendency to feel ashamed, physically aggressive or engage in socially aggressive behaviors is greater among individuals with higher levels of pathological narcissism. An example of a conceptual diagram of a cross-level moderation of pathological narcissism on the within-person association of a dimension of perfectionism and an outcome (here, social aggression) is provided in Figure 3. For simplicity, the mediation model was not included in the diagram. A series of 2-1-1 mediation models that included cross-level interaction were run to evaluate each outcome variable (i.e., shame, socially aggressive behaviors, physically aggressive feelings) separately. Moreover, each facet of perfectionism and perfectionistic self-presentation were entered into the MSEM model separately. Lastly, cross-level interaction figures were created by first using the reshape2 and dplyr packages (Wickham, 2012; Wickham, François, Henry, & Müller, 2018) to restructure and select specific data, and then using the ggplot2 package (Wickham, 2016) for data visualization; these analyses were done via R statistical software in MplusAutomation (Hallquist & Wiley, 2018).

Chapter 4

RESULTS

Preliminary Analyses

Table 3 shows the means, standard deviations, and correlations at the between-person and within-person level. As expected, pathological narcissism was positively related to the average level of weekly shame (r = 0.28), average level of weekly physically aggressive feelings (r = 0.25), and the average level of weekly socially aggressive behaviors (r = 0.32). Mediational analyses were performed to explore these correlated relationships, described below.

A series of intercept only models (i.e., no predictors) explored variability in weekly assessed study variables at both the within- and between-person level. The intraclass correlation coefficients (ICC) summarized in Table 4 show that 57-62% of the total variability in the three outcome variables (shame, physical aggressive feelings, and social aggression) reside at the between-person level, thereby leaving 38-43% as within-person variability. Furthermore, the proportion of between-person variance for perfectionism ratings ranged from 67% (self-oriented perfectionism) to 80% (prevention focused perfectionistic self-presentation). This means that between 20% and 33% of the variance in perfectionism variables is situated at the within-person level. Taken together, ICC analyses indicate there is a substantive amount of within-person variance across all weekly measures that is worth examining.

Mediation

A summary of whether mediation hypotheses were fully supported, partially supported, or unsupported based on study findings can be found in Table 1. Hypothesis 1 stated that pathological narcissism would be positively related to average levels of weekly feelings of shame (1a). As shown in Table 5 the total effect of narcissism on average levels of the likelihood of experiencing shame feelings on a given week (odds ratio [*OR*] = 1.95, 95% CIs: 0.39; 1.02) and the degree to which an individual experiences average levels of weekly shame was significant (Est. = 0.07, 95% CIs: 0.00; 0.13). Hypothesis 1 also stated that average levels of weekly promotion focused perfectionistic self-presentation (1b) and average levels of weekly prevention focused perfectionistic self-presentation (1c) will both (considered separately) at least partially mediate the relationship between pathological narcissism and the average level of weekly shame. These hypotheses were partially supported. Pathological narcissism predicted higher average levels of weekly promotion focused perfectionistic self-presentation (Est. = 1.05, 95% CIs: 0.78; 1.31) and average levels of weekly promotion focused perfectionistic self-presentation predicted greater odds of a person reporting any amount of shame feelings on a given week (*OR* = 1.17, 95% CIs: 0.01; 0.33). Furthermore, even with promotion focused perfectionistic self-presentation in the mediation model, pathological narcissism significantly increases the odds of a person reporting any amount of feelings of shame on a given week (*OR* = 1.67; 95% CIs: 0.14; 0.88). There was also a significant indirect (mediational) effect of narcissism on the log odds of weekly feelings of shame through average levels of weekly promotion focused perfectionistic self-presentation (*OR* = 1.19, 95% CIs: 0.00; 0.36), thereby providing evidence of partial mediation (see Figure 4).

However, there was no direct effect of average levels of weekly promotion focused perfectionistic self-presentation on the degree to which an individual experiences average levels of weekly shame (Est. = 0.01, 95% CIs: -0.02; 0.04). There was also no longer a direct effect of pathological narcissism on the degree to which an individual experiences average levels of weekly shame when controlling for promotion focused perfectionistic self-presentation (Est.= 0.05; 95% CIs: -0.02; 0.12). No significant indirect effect was found for the continuous shame outcome (see Table 6).

A somewhat similar pattern of results emerged in the model with prevention-focused perfectionistic self-presentation and shame. Specifically, pathological narcissism predicted higher average levels of weekly prevention focused perfectionistic self-presentation (Est. = 0.77, 95% CIs: 0.55; 0.99) and average levels of weekly prevention focused perfectionistic self-presentation predicted greater odds of a person reporting any amount of shame feelings on a given week (*OR* = 1.54, 95% CIs: 0.24; 0.62). However, when controlling for prevention focused perfectionistic self-presentation, pathological narcissism was no longer a significant predictor of the log odds of experiencing average levels of weekly shame (*OR* = 1.39, 95% CIs: -0.01; 0.68). Test of indirect effects indicate the indirect path from pathological narcissism to the log odds of shame via average levels of weekly prevention focused perfectionistic self-presentation was significant (*OR* = 1.38, 95% CIs: 0.16; 0.52). This is indicative of full mediation (Figure 5).

Similar to the mediation model with promotion focused perfectionistic self-presentation and shame, there was no direct effect of average levels of weekly prevention focused perfectionistic self-presentation on the degree to which an individual experiences

average levels of weekly shame (Est. = 0.03, 95% CIs: -0.01; 0.07). Furthermore, pathological narcissism no longer predicts the degree to which an individual experiences average levels of weekly shame when prevention focused perfectionistic self-presentation is included in the model (Est.= 0.04; 95% CIs: -0.03; 0.11) and no indirect effect with continuous shame as the outcome was identified (see Table 7).

Hypothesis 2 stated that pathological narcissism would be positively related to average levels of weekly feelings of physical aggression (2a). As shown in Table 8, there was a total effect of narcissism on average levels of the likelihood of experiencing physically aggressive feelings on a given week (*OR* = 1.84, 95% CIs: 0.20; 1.01) and the degree to which an individual experiences average levels of weekly physically aggressive feelings was significant (Est. = 0.08, 95% CIs: 0.03; 0.12). Hypothesis 2 also stated that average levels of weekly promotion focused perfectionistic self-presentation (2b) and average levels of weekly prevention focused perfectionistic self-presentation (2c) would both at least partially mediate the relationship between pathological narcissism and average levels of weekly feelings of physical aggression. Results did not provide support for either of these hypotheses. While there was a significant direct effect of pathological narcissism on average levels of weekly promotion focused perfectionistic self-presentation (Est. = 1.04, 95% CIs: 0.77, 1.31), no significant direct effect of average levels of weekly promotion focused perfectionistic self-presentation on the likelihood of a person reporting any amount of physically aggressive feelings on a given week (*OR* = 0.99, 95% CIs: -0.23; 0.21) or the degree to which an individual experiences average levels of weekly physically aggressive feelings (Est. = -0.02, 95% CIs: -0.04; 0.01) were found. With promotion focused perfectionistic self-presentation in the mediation model,

pathological narcissism remained a significant predictor of the average levels of weekly binary and continuous physically aggressive feelings outcomes (*OR* = 1.86, 95% CIs: 0.12; 1.10 and Est. = 0.09, 95% CIs: 0.03; 0.15, respectively); however, no significant indirect effects were found for either outcomes (see Table 9), thus results did not support H2b.

A similar pattern emerged for the mediation model including prevention focused perfectionistic self-presentation and physically aggressive feelings. Specifically, there was a significant direct effect of pathological narcissism on average levels of weekly prevention focused perfectionistic self-presentation (Est. = 0.76, 95% CIs: 0.54, 0.98), but no significant direct effect of average levels of weekly promotion focused perfectionistic self-presentation on the likelihood of a person reporting any amount of physically aggressive feelings on a given week (*OR* = 1.03, 95% CIs: -0.23; 0.29) or the degree to which an individual experiences average levels of weekly physically aggressive feelings (Est. = -0.00, 95% CIs: -0.03; 0.03) were detected. Pathological narcissism remained a significant predictor of the average levels of weekly binary and continuous physically aggressive feelings outcomes when controlling for average levels of weekly prevention-focused perfectionism self-presentation behaviors (*OR* = 1.75, 95% CIs: 0.10; 1.03 and Est. = 0.07, 95% CIs: 0.01; 0.12, respectively). There were no significant indirect effects for either outcome (see Table 10), thereby providing no evidence for H2c.

Hypothesis 3 stated that pathological narcissism would be positively related to average levels of weekly socially aggressive behaviors (3a). As shown in Table 11, the total effect of narcissism on average levels of weekly socially aggressive behaviors was significant (Est. = 0.32, 95% CIs: 0.18; 0.47). Next, it was hypothesized that average

levels of weekly promotion focused perfectionistic self-presentation (3b) and weekly prevention focused perfectionistic self-presentation (3c) would both at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors. As shown in Table 12, the direct effect of pathological narcissism on average levels of weekly promotion focused perfectionistic self-presentation was significant (Est. = 1.06, 95% CIs: 0.79; 1.33), but there was no direct effect of average levels of weekly promotion focused perfectionistic self-presentation on average levels of weekly socially aggressive behaviors (Est = 0.01; 95% CIs: -0.07; 0.09). With promotion focused perfectionistic self-presentation in the mediation model, pathological narcissism continued to be a significant predictor of average levels of weekly socially aggressive behaviors (Est. = 0.31; 95% CIs: 0.14; 0.47). Results do not provide support for H3b because there was no indirect effect through promotion focused perfectionistic self-presentation (Est. = 0.02, 95% CIs: -0,07; 0.10).

In contrast, findings do support H3c (see Table 13). There was a significant direct effect of pathological narcissism on average levels of weekly prevention focused perfectionistic self-presentation was significant (Est. = 0.80, 95% CIs: 0.57; 1.03), as well as a significant direct effect of average levels of weekly prevention focused perfectionistic on average levels of weekly socially aggressive behaviors (Est. = 0.10; 95% CIs: 0.01; 0.19). With prevention focused perfectionistic self-presentation in the model, pathological narcissism remained a significant predictor of average levels of weekly socially aggressive behaviors (Est. = 0.25; 95% CIs: 0.09; 0.41). Tests of indirect effects showed partial mediation through average levels of weekly prevention focused perfectionistic self-presentation (Est. = 0.07; 95% CIs: 0.00; 0.16; Figure 6).

Hypothesis 4 stated average levels of weekly socially prescribed perfectionism (SPP) (4a) would at least partially mediate the relationship between pathological narcissism and average levels of weekly shame. As shown in Table 14, pathological narcissism significantly predicts higher average levels of weekly socially prescribed perfectionism (Est. = 0.83, 95% CIs: 0.62; 1.04). There is also a significantly direct effect of average levels of weekly SPP on average log odds of weekly feelings of shame (*OR* = 1.79, 95% CIs: 0.38; 0.79), and independently, on the average degree to which an individual experiences shameful feelings over time (Est. = 0.07, 95% CIs: 0.03; 0.11). Test of indirect effects indicate that the indirect paths from pathological narcissism to the binary or continuous shame outcome variables (considered separately) via average levels of weekly SPP were significant (*OR* = 1.60, 95% CIs: 0.29; 0.71 and Est. = 0.06, 95% CIs: 0.03; 0.10, respectively). These findings represent full mediations given that the effect of pathological narcissism on the binary and continuous shame outcome variables were no longer significant when SPP is included in the model (see Figures 7 and 8, respectively), thus supporting H4a.

In contrast, it was hypothesized that the average levels of weekly self-oriented perfectionism (SOP) (4b) and average level of weekly other-oriented perfectionism (OOP) (4c) would each independently be ruled out as a mediator of the association between pathological narcissism and average levels of weekly shame because average level of weekly shame is expected to be unrelated to average levels of weekly SOP and OOP. While, as expected, there was a significant direct effect of pathological narcissism on average levels of weekly SOP (Est. = 0.39, 95% CIs: 0.25; 0.53), the average levels of SOP did not significantly predict binary and continuous shame outcome variables (see

Table 15), thereby supporting H4b. Unexpectedly, pathological narcissism had a negative and insignificant predictor of average levels of weekly OOP (Est. = -0.18, 95% CIs: -0.37; 0.02). However, there was support for H4c given there was no significant direct effect of average levels of weekly OOP on the binary or continuous shame outcome variables (see Table 16).

Hypothesis 5 stated that average levels of weekly SPP (5a) and OOP (5b) would each, independently, at least partially mediate the relationship between pathological narcissism and average levels of weekly physically aggressive feelings. There was some support for H5a. As shown in Table 17, pathological narcissism significantly predicts higher average levels of weekly SPP (Est. 0.83; 95% CIs: 0.61; 1.04), and the average levels of weekly SPP significantly predicts a greater likelihood of experiencing physically aggressive feelings on a given week (*OR* = 1.45, 95% CIs: 0.11; 0.65), but not on the average degree to which a person experiences physically aggressive feelings over time. Test of indirect effects indicate that the indirect effect of pathological narcissism on the average levels of the binary (but not continuous) physically aggressive outcome variable was mediated by the average levels of weekly SPP (*OR* = 1.35, 95% CIs: 0.08; 0.56). As can be seen in Figure 9, this result demonstrates full mediation given that the direct effect of pathological narcissism on binary physically aggressive feelings was no longer significant when controlling for SPP (*OR* = 1.35, 95% CIs: -0.16: 0.77).

Unexpectedly, there was no support for H5b. There was no direct effect of pathological narcissism on average levels of weekly OOP (Est. = -0.17, 95% CIs: -0.37; 0.03). Moreover, average levels of weekly OOP did not significantly predict average levels of the binary or continuous physically aggressive feelings outcome variable (*OR* =

0.91, 95% CIs: -0.38; 0.19 and Est. = -0.01, 95% CIs: -0.04; 0.02, respectively. With average levels of weekly OOP variable in the mediation only model, pathological narcissism remained a significant predictor of the likelihood of experiencing average levels of weekly physically aggressive feelings (*OR* = 1.84, 95% CIs: 0.21; 1.02), as well as the degree to which an individual experiences average levels of weekly feelings of physical aggression (Est. = 0.07, 95% CIs: 0.02; 0.12). No significant indirect effects were found in this model (see Table 18).

Hypothesis 5c stated that average levels of weekly SOP would be ruled out as a mediator of the association between pathological narcissism and average levels of weekly physically aggressive feelings given that average levels of weekly feelings of physical aggression is expected to be unrelated to average levels of weekly SOP. Results supported H5c. While pathological narcissism significantly predicted higher average levels of weekly SOP (Est.= 0.39, 95% CIs: 0.25; 0.53), there was no significant direct effect of average levels of weekly SOP on average levels of binary or continuous physically aggressive feelings outcome variable (*OR* = 0.75, 95% CIs: -0.70; 0.11 and Est. = -0.04, 95% CIs: -0.09; 0.01, respectively). With SOP in the mediation only model, pathological narcissism remained a significant predictor of average levels of weekly binary and continuous physically aggressive feelings outcomes (*OR* = 2.12, 95% CIs: 0.30; 1.22 and Est. = 0.09, 95% CIs: 0.04; 0.14, respectively). No indirect effects were found in this model (see Table 19).

Hypothesis 6a stated that average levels of weekly OOP would at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive feelings. There is no evidence to support this hypothesis (see Table

20). Surprisingly, pathological narcissism had a negative and insignificant prediction on average levels of weekly OOP (Est. = -0.18, 95% CIs: -0.38; 0.02). Also unanticipated was that the average levels of weekly OOP negatively predicted average levels of weekly socially aggressive behaviors (Est. = -0.13, 95% CIs: -0.24; -0.03). As expected, with OOP in the mediation only model, there remained a significant direct effect of pathological narcissism on average levels of socially aggressive behaviors (Est. = 0.30, 95% CIs: 0.16; 0.44).

Finally, predictions were made that average levels of weekly SOP and SPP would each be ruled out as mediator of the association between pathological narcissism and average levels of weekly socially aggressive behaviors given that average levels of socially aggressive behaviors is expected to be unrelated to average levels of weekly SOP (H6b) and SPP (H6c). Results supported H6b. The direct effect of pathological narcissism on average levels of weekly SOP was significant (Est. = 0.42, 95% CIs: 0.27; 0.57) but, as expected, there was no direct effect of average levels of weekly SOP on average levels of weekly socially aggressive behaviors (Est= -0.14, 95% CIs: -0.28; 0.01). With SOP in the mediation only model, pathological narcissism continued to be a significant predictor of average levels of weekly socially aggressive behaviors (Est = 0.37, 95% CIs: 0.23; 0.53). No indirect effect was found in this model (see Table 21).

In terms of SPP, findings disconfirmed H6c (see Table 22). While the direct effect of pathological narcissism on average levels of weekly socially prescribed perfectionism was significant (Est = 0.85, 95% CIs: 0.63; 1.07), contrary to expectations, there was a significant direct effect of average levels of weekly SPP on average levels of weekly socially aggressive behaviors (Est. = 0.13, 95% CIs: 0.03; 0.22). Furthermore, test of

indirect effects unexpectedly showed a significant indirect effect of pathological narcissism on average levels of weekly socially aggressive behavior was through average levels of weekly SPP (Est. = 0.11, 95% CIs: 0.02; 0.20). As can be seen in Figure 10, there was evidence of partial mediation given pathological narcissism remained a significant predictor of average levels of weekly socially aggressive behaviors controlling for average levels of weekly SPP (Est. = 0.22, 95% CIs: 0.05; 0.38).

Within-person Associations

Next, within-person associations were examined in the 2-1-1 mediation only model previously described. A summary of whether within-person association hypotheses were fully supported, partially supported, or unsupported based on study findings can be found in Table 2. According to Hypothesis 7, there would be a significant random effect for positive within-person associations between weekly promotion focused perfectionistic self-presentation and weekly shame (7a.1), as well as between weekly prevention focused perfectionistic self-presentation and weekly shame (7b.1). Results suggest they do (see Tables 6 and 7, respectively). Specifically, on weeks' when the prototypical participant reports more promotion focused perfectionistic self-presentation than usual or prevention focused perfectionistic self-presentation than usual, they also report a greater likelihood of experiencing shame (*OR* = 1.14, 95% CIs: 0.03; 0.24 and *OR* = 1.40, 95% CIs: 0.20; 0.47, respectively) and report a greater degree of shameful feelings on weeks they reported any amount of shame (Est. = 0.06, 95% CIs: 0.03; 0.08 and Est. = 0.07, 95% CIs: 0.04; 0.11, respectively).

Hypothesis 9 stated that there would be a significant random effect for positive weekly within-person associations between promotion focused perfectionistic self-

presentation and feelings of physical aggression (8a.1), as well as between prevention focused perfectionistic self-presentation and feelings of physical aggression (8b.1). The former hypothesis was disconfirmed (see Table 9) but the latter hypothesis was confirmed (see Table 10). Thus, findings suggest that on weeks' when the prototypical participant reports more prevention focused perfectionistic self- presentation (but not promotion focused perfectionistic self-presentation behaviors) than usual, they also report a greater likelihood of feeling physically aggressive (*OR*= 1.26, 95% CIs = 0.07; 0.38) and report a greater degree of physically aggressive feelings (Est. = 0.05; 95% CIs: 0.02; 0.08).

A similar pattern of results emerged when weekly socially aggressive behaviors was the outcome variable in the mediation only model. Counter to Hypothesis 9a.1, there was no significant random effect of weekly promotion focused perfectionistic self-presentation behaviors on weekly socially aggressive behaviors (Est. = 0.03, 95% CIs: -0.01; 0.06; Table 12). However, there was support for Hypothesis 9b.1, whereby a significant positive within-person association existed between weekly prevention focused perfectionistic self-presentation and weekly socially aggressive behaviors (see Table 13). Specifically, findings indicate that during weeks' when the prototypical participant reports more prevention focused perfectionistic self-presentation (but not promotion focused perfectionistic self-presentation) than usual, they engage in more socially aggressive behaviors (Est. = 0.10; 95% CIs: 0.05; 0.14).

It was predicted that there would not be a significant random effect for within-person associations between weekly self-oriented perfectionism (SOP) and weekly shame (Hypothesis 10a.1), as well as between weekly other-oriented perfectionism

(OOP) and weekly shame (Hypothesis 10b.1) The former hypothesis was confirmed (see Table 15), whereas the latter hypothesis was disconfirmed, as a significant negative random effect was found (see Table 16). Additionally, Hypothesis 10c.1 stated that there would be a significant random effect for positive within-person associations between weekly socially prescribed perfectionism (SPP) and weekly shame. This hypothesis was confirmed (see Table 14), demonstrating that during weeks' when the prototypical participant reports more SPP than usual, they also report increased odds of having shameful feelings (*OR* = 1.31; 95% CIs: 0.16; 0.39) and report a greater degree of shameful feelings on weeks they reported any amount of shame (Est. = 0.08; 95% CIs: 0.05; 0.11).

According to Hypothesis 11a.1 there would not be a significant random effect for within-person associations between weekly SOP and weekly feelings of physical aggression. Results partially support this hypothesis, as there was a significant random effect pertaining to the binary (but not the continuous) process of physically aggressive feelings (see Table 19). Conversely, it was predicted that there would be a significant random effect for positive within-person associations between weekly SPP and weekly feelings of physical aggression (11b.1), as well as between weekly OOP and weekly feelings of physical aggression (H11c.1). Results showed some support for the former hypothesis (see Table 17) but did not support the latter hypothesis (see Table 18). Specifically, findings indicate that on weeks' when the prototypical participant reports more SPP than usual, they experience a greater degree of physically aggressive feelings (Est. = 0.03; 95% CIs: 0.01; 0.06); however, there was no significance for the likelihood of experiencing physically aggressive feelings (*OR* = 1.07; 95% CIs: -0.06; 0.19).

Finally, it was hypothesized that there would not be a significant random effect for within-person associations between weekly SOP and weekly socially aggressive behaviors (H12.a1), as well as between weekly SPP and weekly socially aggressive behaviors (H12.b1). Contrary to expectations, the first hypothesis was disconfirmed (see Table 21); however, the second hypothesis was supported (see Table 22). The unexpected results show that during weeks' when the prototypical participant reports more self-oriented perfectionism than usual, they engage in more socially aggressive behaviors (Est. = 0.07, 95% CIs: 0.02; 0.13). Lastly, as shown in Table 20, the hypothesis that there would be a significant random effect for within-person associations between weekly OOP and weekly socially aggressive behaviors (H12.c1) was disconfirmed.

Cross-level Interactions

The 2-1-1 mediation model discussed earlier was extended to include cross-level interactions in order to test whether pathological narcissism moderates observed within-person associations of weekly dimensions of perfectionism or perfectionistic self-presentation behaviors with weekly feelings of shame, weekly socially aggressive behaviors, or weekly feelings of physical aggression. This also allows us to see whether observed mediation results described earlier still hold when a cross-level interaction is included in this combined MSEM mediation and moderation model. For purposes of clarity, moderation effects and significant mediation effects will be discussed, and main effects will only be mentioned if there is a change in the pattern of results after the inclusion of a cross-level interaction and covariate of time. Results are fully displayed in Tables 23-37 and a summary of whether moderation hypotheses were fully supported, partially supported, or unsupported based on study findings can be found in Table 2.

Hypothesis 7 stated that on the one hand, pathological narcissism would mitigate the positive association between weekly promotion focused perfectionistic self-presentation and weekly shame (7a.2), on the other hand, narcissism would amplify the positive association between weekly prevention focused perfectionistic self-presentation and weekly shame (7b.2). No significant cross-level interaction effects were found between weekly promotion-focused perfectionistic self-presentation and log odds of weekly binary shame (*OR* = 1.20, 95% CIs: -0.04; 0.44), or with weekly continuous shame outcome variable (Est. = 0.03, 95% CIs: -0.03; 0.08), nor between weekly prevention focused perfectionistic self-presentation and log odds of the weekly binary shame (*OR* = 1.21, 95% CIs; -0.12; 0.51), or with weekly continuous shame outcome variable (Est. = 0.01, 95% CIs: -0.06, 0.08). Thus, neither hypothesis was supported (see Tables 23 and 24, respectively). However, despite the additional paths, the main associations between pathological narcissism and the odds for a person reporting any amount of shame on a given week are still partially mediated by average levels of weekly promotion focused perfectionistic self-presentation (see Figure 11), as well as separately, fully mediated by average levels of weekly prevention-focused perfectionistic self-presentation (see Figure 12).

Hypothesis 8 stated that pathological narcissism would amplify the positive association between weekly promotion focused perfectionistic self-presentation and weekly physically aggressive feelings (8a.2), as well as between weekly prevention focused perfectionistic self-presentation and weekly physically aggressive feelings (8b.2). No significant cross-level interaction effects were found between weekly promotion-focused perfectionistic self-presentation and log odds of weekly binary physically

aggressive feelings (*OR* = 1.14, 95% CIs: -0.14; 0.42), or with the weekly continuous physically aggressive feelings outcome variable (Est. = -0.04, 95% CIs: -0.09; 0.02), nor between weekly prevention focused perfectionistic self-presentation and log odds of weekly binary physically aggressive feelings (*OR* = 1.17, 95% CIs; -0.17; 0.49), or with the weekly continuous physically aggressive feelings outcome variable (Est. = 0.01, 95% CIs: -0.06, 0.07). Thus, neither hypothesis was supported (see Tables 25 and 26, respectively).

According to Hypothesis 9, pathological narcissism would amplify the positive association between weekly promotion focused perfectionistic self-presentation and weekly socially aggressive behaviors (H9a.2), as well as between weekly prevention focused perfectionistic self-presentation and weekly socially aggressive behaviors (H9b.2). Findings supported both hypotheses given the significant and positive cross-level interaction effects emerged for the two separate models (for promotion focused, Est. = 0.10, 95% CIs: 0.03; 0.17; Table 27); for prevention focused, Est. = 0.18, 95% CIs: 0.10; 0.27; Table 28). Simple-slope tests confirmed this interaction such that there was a stronger weekly within-person effect of promotion focused perfectionistic self-presentation or prevention focused perfectionistic self-presentation on socially aggressive behaviors among individuals with high pathological narcissism (for high random slope, *PROMO.SA*$_{r:}$ Est. = 0.11, *SE* = 0.03, 95% CIs: 0.05; 0.17; for low random slope, PROMO.SA$_{r}$: Est. = -0.02, SE = 0.03, 95% CIs: -0.08; 0.04; for high random slope, *PREV.SA*$_{r:}$ Est. = 0.19, *SE* = 0.04; 95% CIs: 0.12; 0.27; for low random slope, *PREV.SA*$_{r}$: Est. = -0.05, SE = 0.04, 95% CIs: -0.13; 0.03). In other words, results suggest that reports of greater-than-usual weekly promotion focused perfectionistic self-presentation

or greater-than-usual weekly prevention focused perfectionistic self-presentation were separately associated with higher-than-usual reports of engaging in social aggression among individuals with high pathological narcissism compared to those with low narcissism (see Figures 13 and 14, respectively). Furthermore, the previous finding that average levels of weekly prevention focused perfectionistic self-presentation partially mediated the effects of pathological narcissism and average levels of weekly socially aggressive behaviors held up even in the face of a significant cross-level interaction effect and the inclusion of time as a covariate in the model (see Figure 15).

According to Hypothesis 10, there would be no moderation effect of pathological narcissism on weekly self-oriented perfectionism (SOP) and weekly shame (H10a.2) nor on weekly other-oriented perfectionism (OOP) and weekly shame (10b.2). Results confirmed both hypotheses for the binary and continuous shame outcomes (see Tables 29 and 30, respectively). In contrast, it was hypothesized that pathological narcissism would amplify the positive association between weekly socially prescribed perfectionism (SPP) and weekly shame (H10c.2). This expectation was not supported for either the binary or continuous shame outcome (*OR* = 1.20, 95% CIs: -0.09; 0.45 and Est. = 0.03, 95% CIs: -0.03; 0.09). However, as shown in Table 31, there was still evidence for full mediation in the combined MSEM mediation and moderation model, whereby the indirect effect of pathological narcissism on the log odds of average levels of weekly shame (*OR* = 1.65, 95% CIs: 0.30; 0.75) and the degree to which an individual experiences average levels of weekly shame (Est. = 0.06, 95% CIs: 0.03; 0.10) through SPP remained significant, even in the absence of a direct effect (see Figures 16 and 17, respectively).

`Hypothesis 11a.2 stated that there would be no moderation effect of pathological narcissism on weekly SOP and weekly feelings of physically aggression. As shown in Table 32, results support this hypothesis for both binary and continuous physically aggressive feelings outcome variables (*OR* = 0.88, 95% CIs: -0.48; 0.20 and Est. = 0.01, 95% CIs: -0.08; 0.10). In contrast, it was hypothesized that pathological narcissism would amplify the positive relationship between weekly SPP and weekly feelings of physical aggression (H11b.2), as well as between weekly OOP and weekly feelings of physical aggression (H11c.2). Findings did not support either hypothesis as there was no significant cross-level interaction for weekly within-person SPP-binary or continuous physical aggressive feelings associations (*OR* = 1.00, 95% CIs: -0.29; 0.29 and Est. = 0.03, 95% CIs: -0.02; 0.08, respectively; Table 33) or for weekly within-person OOP-binary or continuous physically aggressive feelings associations (*OR* = 0.84. 95% CIs: -0.48; 0.16 and Est. = 0.03, 95% CIs: -0.04; 0.09, respectively; Table 34). Nonetheless, evidence remains that the initial positive relationship between pathological narcissism and average levels of the binary weekly physically aggressive feelings is fully mediated by average levels of weekly SPP (*OR* = 1.36, 95% CIs: 0.08; 0.57), even when a covariate of time and a cross-level interaction is included in the MSEM combined model (see Figure 18).

It was also hypothesized that there would be no moderation effect of pathological narcissism on weekly SOP and weekly socially aggressive behaviors (H12a.2), as well as between weekly SPP and weekly socially aggressive behaviors (H12b.2). Unexpectedly, both hypotheses were disconfirmed given significant and positive cross-level interaction effects for the two separate models were found (for SOP, Est. = 0.22, 95% CIs: 0.13;

0.31; Table 35; for SPP, Est. = 0.11, 95% CIs: 0.03; 0.20 (Table 36). Simple-slope tests confirmed this interaction such that there was a stronger weekly within-person effect of SOP or SPP on socially aggressive behaviors among individuals with high pathological narcissism (for high random slope, *SOP.SAr:* Est. = 0.22, SE = 0.05, 95% CIs: 0.14; 0.32; for low random slope, *SOP.SAr*: Est. = -0.07, SE = 0.05, 95% CIs: -0.16; 0.02; for high random slope, *SPP.SAr:* Est. = 0.10, SE = 0.04, 95% CIs: 0.02; 0.17; for low random slope, *SPP.SAr:* Est. = -0.05, SE = 0.04, 95% CIs: -0.13; 0.03). Put simply, findings suggest individuals high on pathological narcissism, on weeks they reported more SOP or SPP than usual, they also reportedly engaged in more socially aggressive behavior (See Figures 19 and 20). Additionally, average levels of weekly SPP still partially mediated the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors (Est. = 0.01; 95% CIs: 0.00; 0.03), even with the inclusion of time as a covariate and a significant cross-level interaction (see Figure 21). Finally, it was hypothesized that pathological narcissism would amplify the positive association between weekly OOP and weekly socially aggressive behaviors (H12c.2); however, findings did not lend support to this expectation (Est. = 0.04, 95% CIs: -0.04; 4.58). As shown in Table 37, while the indirect effect of pathological narcissism on average levels of weekly OOP remains insignificant, the direction of the relationship changed from negative in the mediation only model to positive in the combined mediation and moderation model (Est. = 0.01, 95% CIs: -0.02; 0.01).

Chapter 5

DISCUSSION

The aim of the present longitudinal study was twofold. First, to investigate whether weekly assessed multidimensional perfectionism dimensions may help at least partly explain why individuals high in pathological narcissism might experience shame, physical aggressive feelings, and engage in socially aggressive behaviors over a two-month study period. The second, to examine whether pathological narcissism might heighten or mitigate weekly within-person experiences of state-like perfectionism and perfectionistic self-presentation behaviors (independent of each other) with feelings of shame, feelings of physical aggression, and/or socially aggressive behaviors over time. Findings and implications are discussed in the context of existing research and theory. Strengths and limitations of the study are also noted.

Pathological Narcissism, Perfectionistic Self-presentation, and Shame

As expected, findings from this longitudinal study provide further evidence for relations between pathological narcissism and shame such that pathological narcissism significantly predicted the increasing likelihood and degree to which a person reported experiencing, on average, shameful feelings over a two-month study period. Whereas cross-sectional studies show small to moderate negative associations between normal trait narcissism and shame (e.g., Gramzow & Tangney, 1992; Morf et al., 2017; Pincus et al., 2009; Schroder-Abe & Fatfouta, 2019), other cross-sectional and daily diary studies show pathological narcissism is positively associated with shame-proneness (e.g., Morf et al.,

2017; Pincus et al., 2009) and daily experiences of shame (Di Sarno et al., 2020). Findings from this study combined with previous ones suggest shame is an emotion most relevant to pathological narcissism (encompassing vulnerability and grandiosity) rather than normal trait narcissism (mostly limited to adaptive grandiose themes).

As discussed earlier, state-like processes of promotion focused and prevention focused perfectionistic self-presentation are regulatory strategies that individuals might use to protect the self from experiencing emotional (e.g., shame) and behavioral (e.g., aggression) problems over time. Some researchers propose that vulnerable narcissists seek validation, respect, and approval from others by actively promoting their supposed perfection to others (Hewitt et al., 2003), and that narcissistic individuals may engage in perfectionistic self-promotion to defend against feelings of shame that may occur in response to narcissistic injury (Kohut, 1972). Narcissistic individuals are also said to use perfectionistic self-presentation strategies (i.e., perfectionistic self-promotion, nondisplay of imperfections, nondisclosure of imperfections) to reduce the likelihood of experiencing shame (Schoenleber & Berenbaum, 2011).

However, given maladaptive perfectionism appears to be linked to emotion dysregulation (see review by Malivoire et al., 2019), the present study anticipated average levels of weekly promotion focused perfectionistic self-presentation behaviors (i.e., perfectionistic self-promotion) and prevention focused perfectionistic self-presentation behaviors (i.e., nondisplay and nondisclosure of imperfections) would each be a mediating factor (considered separately) between higher levels of pathological narcissism and experiences of shame over time. Findings supported these hypotheses. Partial mediation was identified in the case of promotion focused perfectionistic self-

presentation, while full mediation was found with regard to prevention focused perfectionistic self-presentation. That is, the higher individuals scored on pathological narcissism, the greater likelihood they reported experiencing shameful feelings, in part because of their increasing need to promote an image of perfection to others, or because of their increasing need to conceal imperfections from others over time. While the present study cannot answer whether narcissistic individuals engage in promotion focused or prevention focused perfectionistic self-presentation behaviors to regulate their self-esteem or emotions, findings do highlight that there is a cost to engaging in this form of impression management, as it seems to backfire on them, resulting in increasing their likelihood of experiencing the unwanted and overwhelmingly painful emotion of shame over time.

Results from this longitudinal study also replicate cross-sectional findings that show perfectionistic self-presentation styles are positively and moderately related to state shame (Chen et al., 2015), given that promotion focused and prevention focused self-presentation each independently predicted the likelihood and degree to which individuals experienced shameful feelings week-to-week. The present study sought to understand these relationships from an internalizing-externalizing framework and the role that pathological narcissism might have in the strength and direction of their relationships. As noted earlier, given that perfectionistic self-promotion is an outward shame-based regulatory strategy that may be especially relevant to narcissistic individuals (e.g., Schoenleber & Berenbaum, 2012), and that self-promotion behavior is positively associated with externalizing problems (Abell & Bewer, 2014; Carpenter, 2012), it was hypothesized that pathological narcissism would *mitigate* positive weekly within-person

associations between promotion-focused self-presentation and shame. This was unsupported by the absence of a significant cross-level interaction, indicating pathological narcissism does not buffer or reduce the likelihood or degree to which a person experiences' feelings of shame during those weeks' promotion focused perfectionistic self-presentation was used.

In contrast, passive coping and self-concealment behaviors relate to internalizing problems (Compass et al., 2001; Ichiyama et al., 1993), prevention focused self-regulation (but not promotion focus) is associated with neuroticism (Keller, May, Greifender, & Pfattheicher, 2015), and higher narcissistic vulnerability relate to behavioral disengagement (Fernie, Fung, & Nikčević, 2016). With this in mind, pathological narcissism was hypothesized to *amplify* positive weekly within-person associations between prevention-focused self-presentation and shame. This hypothesis was also unsupported by the lack of a significant cross-level interaction, indicating narcissism does not exacerbate the likelihood or degree to which a person experiences' feelings of shame during those weeks' prevention focused perfectionistic self-presentation was used. Nonetheless, the findings as a whole, suggest that promotion-focused perfectionistic self-presentation behaviors (an outward focused regulatory strategy) and prevention-focused perfectionistic self-presentation behaviors (an inward focused regulatory strategy), are both maladaptive regulatory strategies over time that play a role in narcissistic experiences of shame.

Pathological Narcissism, Perfectionism, and Shame

Like perfectionistic self-presentation styles, researchers have proposed that perfectionism, such as the drive to attain unrealistically high standards to avoid failures

that may elicit feelings of shame and incompetence, is also important for emotion regulation in narcissistic pathology (Ronningstam, 2010). Others have suggested that narcissistic individuals experience feelings of shame when they are unable to live up their ideal self-image (e.g., Kohut, 1972; Morrison, 1989; Sorotzkin, 1985). While the present study's findings show pathological narcissism predicts higher average levels of weekly self-oriented perfectionism (SOP; i.e., demanding perfection from oneself) and increases the odds of a person reporting any amount of feelings of shame on a given week, there is no evidence to suggest that narcissistic individuals experience, on average, more shameful feelings because they hold exceedingly high standards for themselves over time. This seems to run counter to some theoretical discussions on the role SOP plays in narcissism (e.g., Ronningstam, 2010).

How might we understand this? Consider that SOP is an inward form of perfectionism – it is involves holding exceedingly high standards for oneself that is independent of others' judgement (Hewitt & Flett, 1991), whereas shame involves a negative evaluation of the self by another real and/or imagined individual (Lewis, 1971, 1987). Additionally, SOP may provide some degree of protection from internalizing problems given holding high standards for oneself is associated with some adaptive characteristics such as achievement motivation, perceived self-control, and conscientiousness (Fee & Tangney, 2000; Klibert et al., 2005). Empirical studies show trait SOP is generally unrelated to feelings of shame (e.g., Fee & Tangney, 2000; Klibert et al., 2005) and state shame (Chen et al., 2014). Findings from the present longitudinal study lend support to this literature at both between-person and within-person levels. Furthermore, if narcissistic individuals' self-worth is contingent on outside approval,

acceptance, and validation, then shameful feelings are less likely to be evoked by an intrapersonal expression of perfectionism, and instead more likely by an interpersonal aspect of perfectionism that involves conditional acceptance; namely, socially prescribed perfectionism (Stoeber et al., 2008).

A variety of cross-sectional studies link trait socially prescribed perfectionism (SPP; i.e., the perception that others set exceedingly high expectations and unrealistic standards for the self) with shame-proneness (e.g., Tangney, 2002), state shame (Chen et al., 2015), and feelings of shame (Klibert et al., 2005). This study provides further evidence of SPP-shame associations at both between-person and within-person levels. Moreover, full mediation was observed in that the higher individuals scored on pathological narcissism, the greater the probability and degree to which they experienced shameful feeling on a given week, because of their perception that others demand perfection from them (i.e., SPP) over time. It is worrisome that SPP and prevention focused presentation behaviors each play a role in narcissistic individuals experiencing shameful feelings over time, as both SPP and perfectionistic self-presentation facets (particularly nondisplay of imperfection) have shown positive associations with suicide outcomes, and these relations were mediated by social hopelessness (an indices for subjective social disconnection) (Roxborough et al., 2012). Furthermore, while vulnerable narcissists may seek to use perfectionistic self-presentation behaviors to obtain approval, validation, and respect from others (Hewitt et al., 2003), ironically, individuals who engage in these behaviors tend to experience greater disconnection and isolation from others (e.g., Chen et al., 2012; Mackinnon & Sherry, 2012). This is important to consider for individuals with narcissistic personality pathology given NPD is associated

with a risk for an increasing number of suicide attempts over time (Ansell et al., 2015) and greater suicide lethality (Blasco-Fontecilla et al., 2009).

As noted above, significant positive weekly within-person relationships between SPP and shame outcomes were observed, indicating that during weeks individuals report more SPP than usual, they also report a greater probability of experiencing shameful feelings as well as a greater degree of shame on weeks they also report any amount of shameful feelings. Contrary to expectations, pathological narcissism did not moderate these associations. The absence of a significant cross-level interaction indicates that the significant positive direct effect of weekly SPP on weekly shame outcomes does not depend on a person's level of pathological narcissism. Thus, more research is necessary to better understand under what conditions these dynamic effects do occur.

Finally, cross-sectional studies show that trait other-oriented perfectionism (OOP) is most closely associated with externalizing (outward focused) problems rather than internalizing (inward focused) problems (e.g., Hewitt & Flett, 1991; Stoeber, 2014a, 2014b, 2015). Given OOP involves unrealistic expectations and standards for others (and not themselves), this study expected that OOP would be unrelated to shameful feelings at the within-person and between-person levels. While results supported the latter hypothesis, the former was only partially confirmed. Specifically, it was found that during weeks' when individuals report having more perfectionistic demands towards others than usual, they also experienced less shameful feelings (OOP was unrelated to the degree to which a person experiences' feelings of shame week-to-week). There is research showing trait OOP is uniquely positively correlated with both uncaring traits and positive self-regard and uniquely negatively related to both other-interest and prosocial

orientation (Stoeber, 2015). In this regard, it would make sense an individual would experience less shame during weeks they also engage in perfectionistic behaviors that signal a disinterest in other people and that they care less about others' expectations.

Pathological Narcissism, Perfectionistic Self-presentation, and Aggression

Findings from this longitudinal study also replicate cross-sectional results indicating pathological narcissism is positively related to physically aggressive forms of antisocial behavior (Burt and Donnellan, 2012) and social/relational aggression (Burt & Donnellan, 2012; Knight et al., 2018). Specifically, results show that the higher individuals scored on pathological narcissism, the more they reported a likelihood of experiencing physically aggressive feelings (i.e., the urge to hit someone) and a greater degree to which they experienced these feelings, as well as (independently) engaging in more socially aggressive behaviors (directly or indirectly) aimed at damaging others' self-esteem and/or reputation across a two-month study period.

Additionally, findings show individuals high in pathological narcissism engage in, on average, more socially aggressive behaviors partly because of, on average, their greater need to conceal and avoid verbally disclosing or behaviorally displaying imperfections to others (i.e., prevention focused perfectionistic self-presentation) over time. While this partial mediation effect suggests prevention focused perfectionistic self-presentation does not fully explain the association between pathological narcissism and social aggression at the between-person level, it does provide some insight into the type of perfectionistic self-presentation behaviors that narcissistic individuals engage in that consequently lead to more specific externalizing behaviors (here, social aggression) over time. What might be a reason that the need to actively hide imperfections from others

plays a particular role in social aggression for individuals characterized by narcissistic personalities? One possible explanation is individuals with pathological narcissism might feel distressed themselves, as perfectionistic self-presentation facets are also associated with psychological distress (Hewitt et al; 2003), and one way of avoiding rejection or criticism about perceived flaws and shortcomings might be to gain a sense of power or satisfaction by derogation of others down through social aggression (e.g., gossip, silent treatment; see Grapsas et al., 2020; Park & Colvin, 2015).

Furthermore, narcissistic individuals might choose this form of aggression over physical aggression because social aggression may be more difficult for others to detect (Xie, Cairns, & Cairns, 2002), thereby possibly reducing the risk of experiencing retaliation or social condemnation (Björkqvist, Österman, & Lagerspetz, 1994). In reality, however, engaging in socially aggressive behaviors likely increases their sensitivity to further narcissistic injury over time. Empirical studies show relational aggression is related to a myriad of emotional, behavioral, and personality problems among emerging young adults (e.g., Dahlen, Czar, Prather, & Dyess, 2013; Dowgwillo, Ménard, Krueger, & Pincus, 2016; Ostrov & Houston, 2008; Werner & Crick, 1999).

Moreover, from an internalizing-externalizing framework, promotion focused perfectionistic self-presentation and prevention focused perfectionistic self-presentation were each independently expected to be positively associated with physically aggressive feelings and socially aggressive behaviors, at the within-person level, because externalizing problems, such as aggression and antisocial behaviors, are interpersonal in nature and perfectionistic self-presentation behaviors are interpersonal self-regulatory strategies that play out in social contexts. One possibility is that covert or overt

expressions of aggression might be a consequence of failed regulation given maladaptive perfectionism is associated with emotion dysregulation (see review by Malivoire et al., 2019). The results from the current study found significant positive weekly within-person associations of prevention focused perfectionistic self-presentation with physically aggressive feelings, and separately with socially aggressive behaviors, but there was no significant finding for promotion focused perfectionistic self-presentation. That is, on weeks when individuals felt they needed to conceal their imperfections from others (but not promote their perfection) more than usual, they also reported engaging in more socially aggressive behaviors, as well as a greater likelihood and degree to which they experienced feelings of physical aggression on weeks they reported any of these feelings.

While these findings do not fit neatly into an internalizing-externalizing framework, they add to the broader literature on regulatory focus theory (Higgins, 1997). Research shows prevention-focused self-regulation, but not promotion focused self-regulation, positively relates to aggressiveness (Keller, Hurst, & Uskul, 2008), hostile tendencies (Keller & Pfattheicher, 2013), and generalized distrust (Keller et al., 2015). Furthermore, highly rejection sensitive and prevention focused individuals tend to use covert strategies (e.g., inhibition of hostile behavior, self-silencing, and withdrawal) to cope with rejection (Ayduk, May, Downey, & Higgins, 2003). The current research demonstrates that the weekly engagement of perfectionistic self-presentation behaviors with a prevention focus are particularly maladaptive and associated with higher levels of physically aggressive urges *and* socially aggressive behaviors over time. Under what conditions might this coupling occur? In the present study, pathological narcissism was

shown to be a significant moderator of associations between dimensions of perfectionistic self-presentation and social aggression at weekly levels.

Specifically, it was found that for individuals high in pathological narcissism, on weeks they reported a greater need to avoid disclosing or displaying mistakes or imperfections than usual, they also reported engaging in more socially aggressive behaviors than usual. As initially expected, pathological narcissism also emerged as a moderator of positive weekly within-person associations between promotion-focused perfectionistic self-presentation and socially aggressive behaviors. Taken together, findings only further emphasize the harmful effects that the engagement of perfectionistic self-presentation behaviors, with either a prevention or promotion focus, have on people, particularly highly narcissistic individuals.

Pathological Narcissism, Perfectionism, and Aggression

Surprisingly, results showed a positive weekly within-person association between self-oriented perfectionism (SOP) and socially aggressive behaviors, as well as between SOP and the likelihood of experiencing physically aggressive feelings. These findings are inconsistent with this study's proposed internalizing-externalizing framework that SOP would not relate to aggressive expressions because aggression is an outward focused interpersonal behavior, whereas SOP reflects internally imposed excessive high expectations and standards. Findings suggest that at a weekly level, being internally focused on perfectionism does not limit a person from exhibiting externalizing antisocial behaviors. Results indicate that on weeks when individuals set exceedingly high, unrealistic goals for themselves more than usual, they also report a greater probability of experiencing physically aggressive feelings, and independently, engage in more

behaviors intended to harm another's self-esteem and/or social status. The latter seems to be particularly true for individuals high in pathological narcissism, given the finding that pathological narcissism moderates the positive weekly within-person association between SOP and socially aggressive behaviors.

According to the threatened ego theory, narcissists may respond aggressively when their inflated, grandiose self-view is threatened, as aggression may serve to re-establish the narcissists' self-esteem (Bushman & Baumeister, 1998). If self-worth is contingent on, for example, achievement of personal success, then narcissistic individuals may seek to re-gain a sense of competency via antisocial acts towards others when they perceive they have failed to live up to their own impossible and unrealistic self-standards and expectations. There is empirical support that individuals high in narcissistic grandiosity react most strongly to achievement failure (Besser & Priel, 2010).

Unexpectedly, pathological narcissism had a negative and insignificant prediction on average levels of weekly other-oriented perfectionism (OOP), and OOP was a negative and insignificant predictor of physically aggressive feelings as well as socially aggressive and physically aggressive feelings at within-person levels. A similar pattern emerged at the between-person level with the exception that OOP has a significant negative prediction on socially aggressive behaviors when controlling for pathological narcissism. These findings differ from a number of empirical studies that show trait OOP is closely related to narcissism (e.g., Sherry et al., 2014; Stoeber, 2014a) and different expressions of aggression (Stoeber et al., 2017). While associations at the between-person level may not hold at the within-person level (Hamaker, 2012; Molenaar, 2004), these results are inconsistent theoretically, as one would likely expect, for example, that

individuals who hold a grandiose sense of entitlement and superiority would also expect both themselves and others to live up to their unrealistic standards and expectations. What might explain this unanticipated result? One possibility is that the perfectionism measure included in this study is not actually capturing the construct of OOP.

An empirical study by Stoeber (2016) compared two frequently used short measures of the Multidimensional Perfectionism Scale (MPS); specifically, the Cox et al. 's (2002) and Hewitt et al.'s (2008), by examining the degree to which their scores replicated correlations of the original version of the MPS. The present study used Cox et al.'s short form. Stoeber found that both short-forms performed well in assessing SOP and SPP; however, Cox et al.'s short form performed less well in assessing OOP (45% of all correlations were outside the 95% confidence intervals of the original MPS). The author concludes that using Cox et al.'s short form to assess OOP would miss capturing positive correlations with, for example, dark personality traits (narcissism, psychopathy, Machiavellianism), callous traits, and aggressive humor. This seems to have occurred in the present study at both between-person and within-person levels, which might explain the lack of significant positive associations between pathological narcissism, OOP, and aggression variables.

From an internalizing-externalizing framework, weekly SPP was expected to relate to some weekly form of aggressive expression because the source of perfectionism involves other people (external). There is some support for this hypothesis in that a significant positive weekly within-person association between SPP and the continuous process of physically aggressive feelings (but not the binary process of physically aggressive feelings) was found. That is, on weeks when individuals perceived others'

demanding perfection from them more than usual, they also report a greater degree to which they experienced physically aggressive feelings. Furthermore, a full mediation effect was found for SPP on the relation between narcissism and the binary (but not continuous) process of physically aggressive feelings, indicating individuals high in pathological narcissism experience, on average, a greater probability of physically aggressive feelings, because of, on average, their perception that others hold unrealistic expectations for them.

It is worth nothing that an action tendency, such as the inclination or impulse to hit someone, corresponds to the *goal* of wanting to emotionally hurt someone (Roseman, Wiest, & Swartz, 1994). Experimental research shows that individuals who experience rejection report greater negative emotions (e.g., anger, sadness, hurt) and an increased urge to behave antisocially toward the rejector (Buckley, Winkel, & Leary, 2004). There are also experimental studies showing that individuals high in narcissism respond aggressively and express anger after experiencing social rejection (Twenge & Campbell, 2003) and that individuals high in NPD traits experience negative emotions (anger and anxiety) about the possibility of interpersonal rejection (De Panfilis et al., 2019). Taken together, common consequences of actual or possible interpersonal rejection seem to revolve around anger, aggressive urges, and aggressive behaviors. Perhaps highly narcissistic individuals experience the urge to physically aggress over time because of a sensitivity to rejection and/or need for validation and admiration that is associated with living up to or failing to live up to SPP (Besser, Flett, & Hewitt, 2004).

This study also anticipated that weekly SPP would be unrelated to weekly social aggression given SPP is associated with an excessive need for approval and fears of

negative evaluation, rejection, abandonment, and dislike by others (Hewitt & Flett, 1991; Hewitt et al., 2008) and that engaging in socially aggressive behaviors could have unintended consequences such as peer rejection (Werner & Crick, 1999). While there was an insignificant weekly within-person association between SPP and social aggression, an unexpected significant cross level interaction was found showing that higher-than-usual weekly reports of SPP related to weekly reports of increased socially aggressive behaviors among individuals with higher pathological narcissism than individuals with lower pathological narcissism. The feeling of imposition from others might be especially triggering for narcissistic individuals to overreact with socially aggressive behavior over time given their self-esteem is unstable, fragile, and highly contingent on external evaluations, and impairments in regulatory functioning would likely make it difficult for them to inhibit aggressive behaviors. Indeed, research shows that individuals with narcissistic traits have trouble regulating their impulses (Vazire & Funder, 2006), and that relational aggression and its specific forms (reactive and proactive) is significantly related to impulsivity (Bailey & Ostrov, 2007).

Also counter to study hypotheses, a partial mediation effect was found showing that individuals high in pathological narcissism engage in, on average, more socially aggressive behaviors partly because of, on average, perceptions that others demand perfection from them over time. This partial mediation result indicates that SPP (like prevention focused perfectionistic self-presentation) is not the only mechanism explaining the harmful effects of pathological narcissism on socially aggressive behaviors over time. Nonetheless, it is clear thus far that interpersonal aspects of multidimensional perfectionism in its dynamic form, specifically, SPP and prevention focused

perfectionistic self-presentation behaviors, are highly consequential for narcissistic individuals because they both, independently, lead them to engage in more socially aggressive behaviors and increases their likelihood of experiencing shameful feelings over time.

While not examined in this study, actively directing attention away from the self onto others via aggression might be a means of self-regulation. Cross-sectional research has demonstrated that feelings of shame may trigger aggression in both depressed patients with NPD and depressed patients without any PD (Fjermestad-Noll et al., 2020), and that compared to community participants, violent offenders with narcissistic traits may use aggression as a maladaptive coping strategy to regulate negative affect (e.g., shame; Velotti et al., 2020). The former study found that perfectionism did not impact levels of aggression. Follow up studies might consider examining under what conditions might narcissistic perfectionists be more likely to have physically aggressive urges or engage in socially aggressive behaviors over time. Potential moderators that are worth exploring include rejection sensitivity and dysfunctional emotion regulation strategies, such as those that are shame based.

Clinical Implications

Perfectionism is clinically of importance to narcissistic pathology and associated problems. The combination of perfectionism and entitled expectations can impair a narcissistic individual's capacity to experience positive reinforcement in their environment, which consequently may result in anxiety, depression, shame, nihilism, and/or social avoidance (Pincus et al., 2014). Narcissistic individuals may live in a perpetual state of dissatisfaction given they tend to evaluate their self-worth based upon

perfectionistic standards and are constantly raising the bar, thereby setting themselves up for failure (Dimaggio & Attinà, 2012). Moreover, narcissistic individuals tend to hold high standards and expectations for others and will derogate individuals who fail to meet them (Dimaggio & Attinà, 2012). A patient's narcissism can pose challenges to alliance building and advancing the therapy (Ronningstam, 2020; Ronningstam & Weinberg, 2013). Similarly, perfectionism and perfectionistic self-presentation also impede therapeutic alliance development (Hewitt et al., 2020).

Perfectionism has largely been discussed as a fairly stable personality characteristic, including in clinical literature on the treatment of perfectionism (see Cheek et al., 2018). However, there is accumulating evidence from this study and others (e.g., Boone et al., 2012, Mackinnon et al., 2017, 2019) that perfectionism exhibits state-like components. This likely has implications for the treatment of individuals higher in narcissistic pathology. For example, the present study found state-like components of socially prescribed perfectionism and prevention-focused perfectionistic self-presentation (i.e., nondisplay of imperfection and nondisclosure of imperfection) have especially harmful effects on individuals high in pathological narcissism, as they cause these individuals, on average, to engage in more socially aggressive behaviors and increase their likelihood of experiencing shameful feelings over time. Additionally, for individuals high in pathological narcissism (compared to those low in narcissism), on weeks these individuals report perceiving others' demanding perfection from them more than usual and, independently, having a greater need to conceal imperfections from others more than usual, they report engaging in more socially aggressive behaviors, and independently, a higher likelihood of experiencing shameful feelings. Thus, it does not appear that weekly

engagement of perfectionistic self-presentation regulatory strategies with a prevention focus (nor promotion focus) actually protect against or reduce shameful feelings over time. This highlights the importance of clinicians exploring the role both state-like and trait-like interpersonal components of perfectionism play in narcissistic patients' emotional and behavioral problems across all domains of their life.

Strengths and Limitations

The current study has both strengths and limitations. A particular strength of this study is its longitudinal design, with pathological narcissism assessed at baseline and other study variables; namely, multidimensional aspects of perfectionism, shame, and different expressions of aggression assessed once a week over a two-month study period. This allowed for the study of causal relationships between these conceptually associated variables. Furthermore, the present study was able to add to the slowly growing literature demonstrating multidimensional perfectionism can be measured as a state-like phenomenon, not limited to a stable trait as it has typically been defined as in the perfectionism literature.

This study is not without its limitations. First, while it is believed that findings from the current study offer clinically relevant information for the treatment of individuals with narcissistic pathology, the degree to which results can be generalized to clinical populations is unclear. Future studies should attempt to replicate and extend this work by studying larger and diverse clinical and nonclinical samples. A second limitation is that perfectionism, perfectionistic self-presentation, shame, and aggression were only measured at weekly time points. It would be interesting to examine whether findings are replicable with daily measurement occasions nested within people. Relatedly, prospective

studies should consider using Ecological Momentary Assessment (EMA; Shiffman, Stone, & Hufford, 2008), such as signal or event-contingent sampling methods, to assess situational or environmental cues that may prompt behavioral problems such as aggressiveness and emotions such as shame, as well as put into context how perfectionistic behaviors and perfectionistic self-presentation behaviors manifest over time. Recent empirical studies also demonstrate narcissism is characterized by momentary within-person variability (e.g., Di Sarno et al., 2020; Edershile & Wright, 2019; Giacomin & Jordan, 2016a, 2016b), thus it would be worthwhile for future studies to assess narcissism at both trait and state levels. Finally, the current study was limited to self-report data, which raises the potential problem of response bias.

Summary and Conclusion

The current longitudinal study sought to understand the dynamic nature of perfectionism and perfectionistic self-presentation in narcissistic pathology and its associations with other relevant outcomes such as shame, socially aggressive behaviors, and physically aggressive feelings over a two-month study period. An internalizing-externalizing conceptual framework was used to try to help understand the phenomena studied. Results show that socially prescribed perfectionism as a dynamic construct (where the source of perfectionism involves external others) is a causal/contributing factor in narcissistic individuals experiencing shameful feelings, physically aggressive feelings, and engaging in socially aggressive behaviors over time. In contrast, the finding that mediation does not occur through average levels of weekly self-oriented perfectionism or other-oriented perfectionism suggests neither of these state-like perfectionism dimensions (where the source of perfectionism involves the self) play a

causal role in narcissistic individuals reporting any outcomes of interest over time. Recognizing that shame and social aggression are evoked by external (not internal) sources of state-like perfectionism in narcissists is important because narcissists' self-worth is contingent on external sources (Pincus, 2013; Pincus et al., 2009; Pincus & Roche, 2011).

Furthermore, promotion focused perfectionistic self-presentation (i.e., perfectionistic self-promotion) and prevention focused perfectionistic self-presentation (i.e., nondisplay and nondisclosure of imperfections) as dynamic constructs both (independently of each other) appear to be contributing factors in narcissistic individuals' experiencing a greater average likelihood of feeling ashamed over time. In addition, only average levels of weekly prevention focused perfectionistic self-presentation (but not promotion focused self-presentation) contributes to narcissistic individuals' engaging in socially aggressive behaviors over time. State-like perfectionistic self-presentation, with either a promotion or prevention focus, did not mediate the positive association between pathological narcissism and physically aggressive feelings over time. Overall, this pattern of results demonstrates that actively engaging in both inward and outward dynamic perfectionistic self-regulatory strategies have harmful effects to varying degrees on narcissistic individuals, where it leads them to experience internal negative affect states (shame) and/or externalizing/antisocial behaviors (social aggression) over time.

Pathological narcissism is also found to be a risk factor for the engagement of socially aggressive behaviors (but not feelings of shame or physically aggressive urges) during weeks individuals report experiencing any of the following more than their usual: having perfectionistic expectations for oneself (self-oriented perfectionism), holding the

perception that others demand perfection from oneself (socially prescribed perfectionism), needing to promote an image of perfection (promotion focused perfectionistic self-presentation), or needing to conceal imperfections from others (prevention focused perfectionistic self-presentation).That is, narcissism plays a moderating role in the weekly engagement of socially aggressive behaviors when perfectionism as a dynamic construct is reflected by an internal (not external) subject and an internal or external source, or when perfectionistic self-presentation as a dynamic construct involves outward or inward regulatory strategies. These findings also demonstrate that a two-month study period was suitable to capture the dynamic interplay between multidimensional perfectionism and social aggression in narcissistic pathology over time.

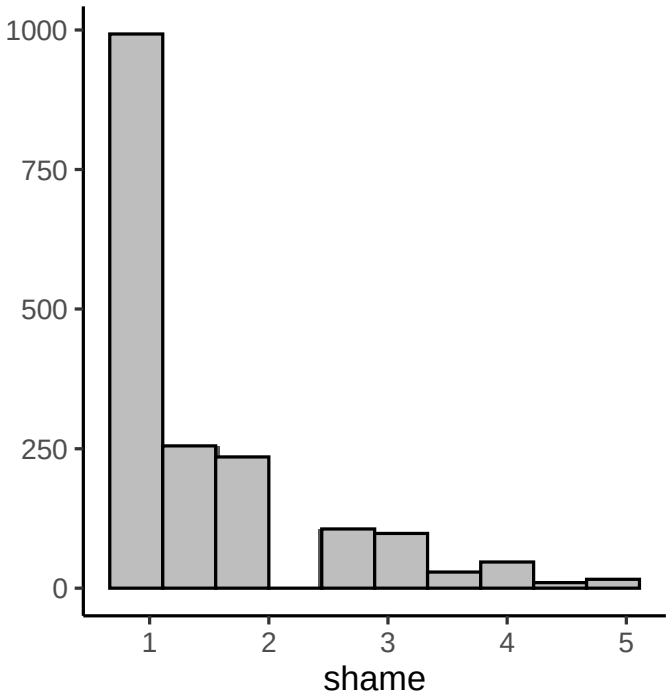
Finally, without exploring state-like perfectionism at the facet level, I would have missed, for example, the unexpected finding that an internal focus on perfectionism does not limit a person from engaging in externalizing behaviors on a week-to-week basis, and that this pattern is amplified among more narcissistic individuals. Likewise, focusing on the lower-order facets of state-like perfectionistic self-presentation, with a promotion or prevention focus, revealed other differences. For instance, weekly prevention focused (but not promotion focused) perfectionistic self-presentation relates to more physically aggressive urges and socially aggressive behaviors over time. When considering overall findings, the most pernicious characteristics of multidimensional perfectionism appear to be state-like socially prescribed perfectionism and state-like prevention focused perfectionistic self-presentation behaviors. These nuanced findings encourage the study of multidimensional perfectionism beyond examination of cross-sectional associations at

the higher-order trait level. In sum, findings support the increasing need to understand how and why intra- and interpersonal state-like manifestations of multidimensional perfectionism impact individuals with narcissistic pathology over time (Pincus, 2020; Pincus, Dawood, Wu, & Bliton, 2020).

Appendix A

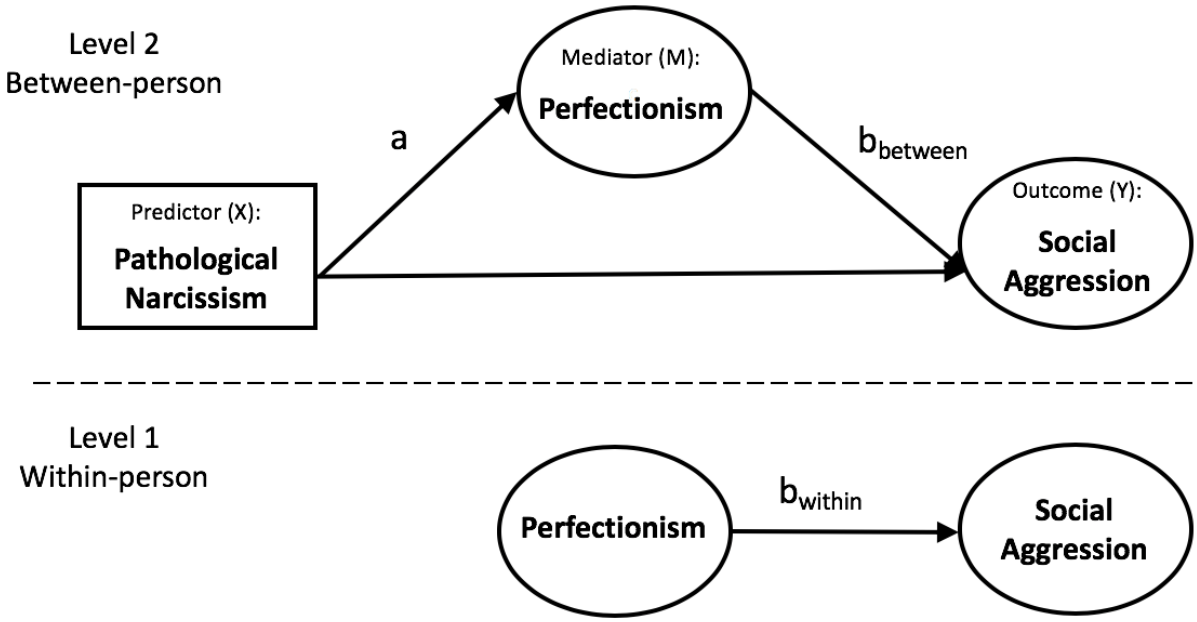
Figures

Figure 1. Histogram of Reported Feelings of Shame Across All Individuals and Time Points.



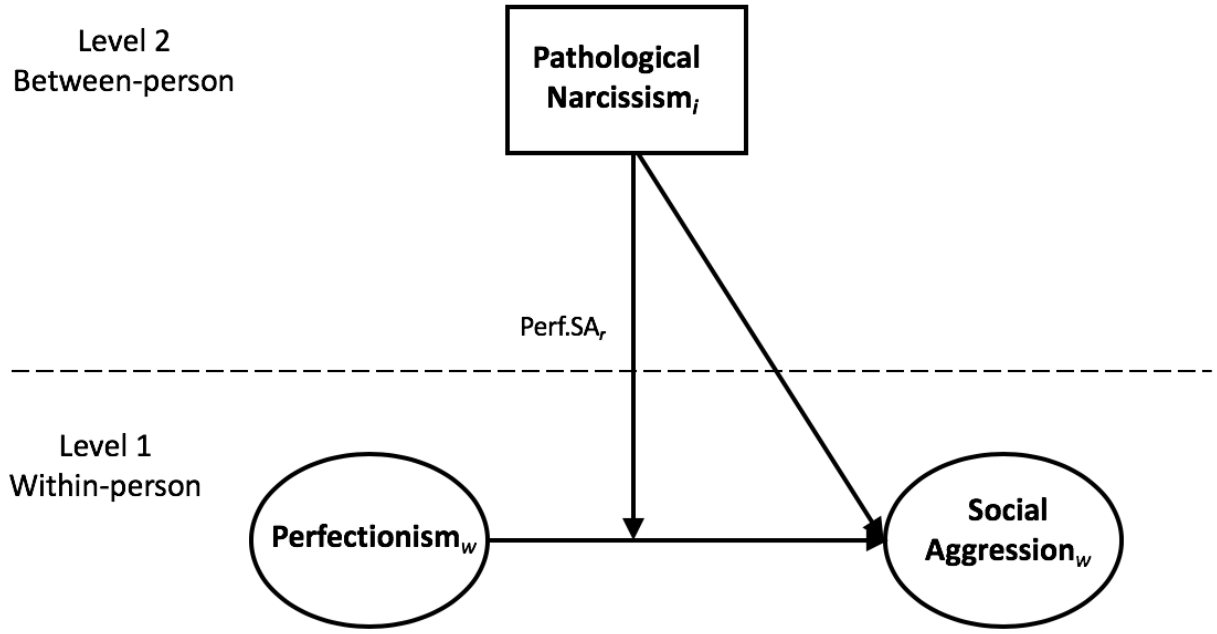
Note. Responses on the *x*-axis are sorted by the degree to which individuals reportedly experienced shame during the past week, ranging from 1= “very slight or not at all” to 5 = “extremely”.

Figure 2. An Example of a Diagram of a 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of Socially Aggressive Behaviors Mediated by Average Levels of Perfectionism.



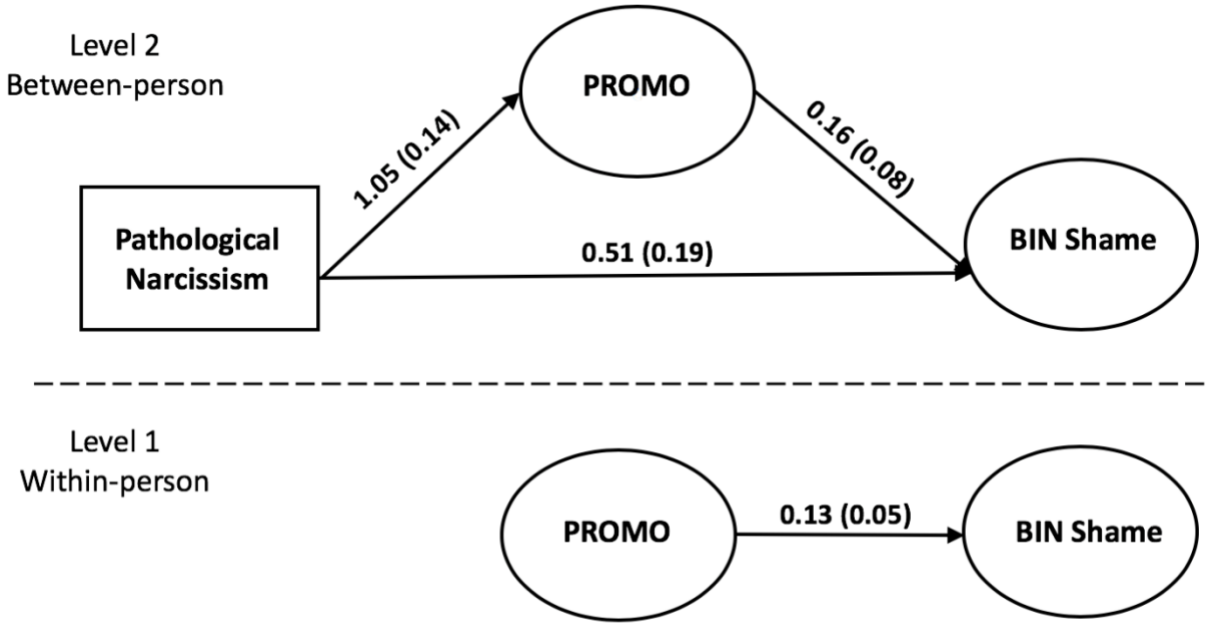
Note. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Mediation occurs when the indirect effect (path a x $b_{between}$) of X on Y through M is significant, even in the absence of a total effect of X on Y.

Figure 3. An Example of a Diagram of a Cross-level Moderation of Pathological Narcissism on the Within-person Association of Perfectionism with Socially Aggressive Behaviors.



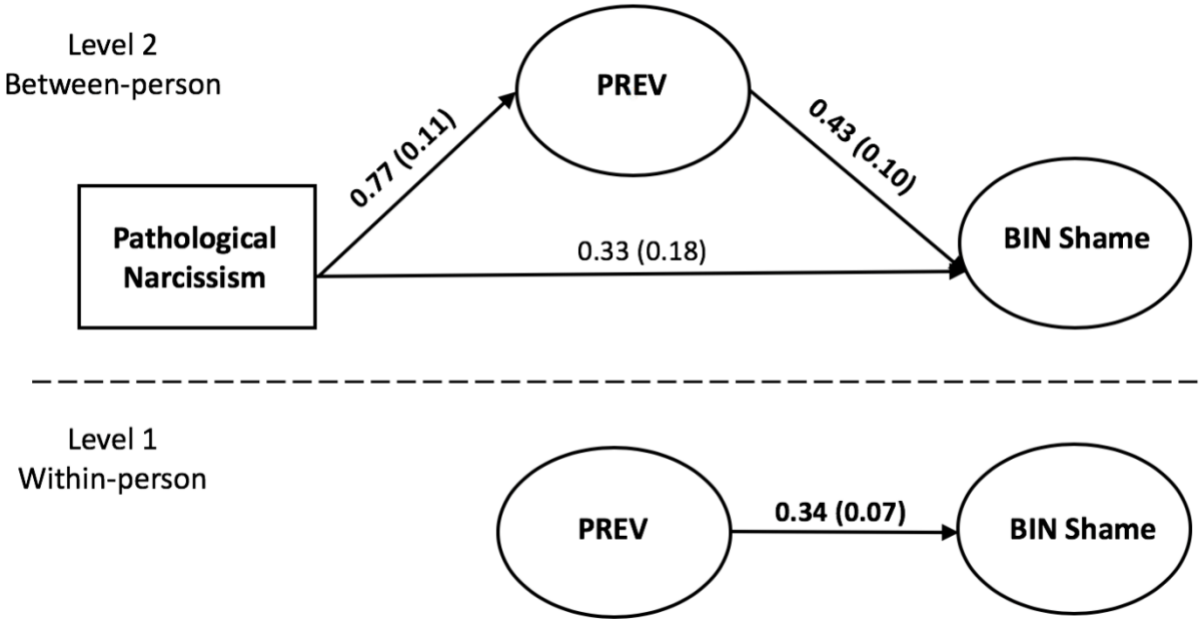
Note. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. The random slope of the within-person regression of socially aggressive behaviors on perfectionism (labelled as Perf.SA*r*) is depicted at Level-2 because the random slope is modeled as a latent variable that varies between persons (i.e., cross-level interaction in which between-person variable moderates a within-person association). Subscript *i* denotes between-person variability of variable and subscript *w* denotes within-person variability of variable. For simplicity, within-person covariate of time is excluded from diagram.

Figure 4. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Promotion Focused Perfectionistic Self-presentation.



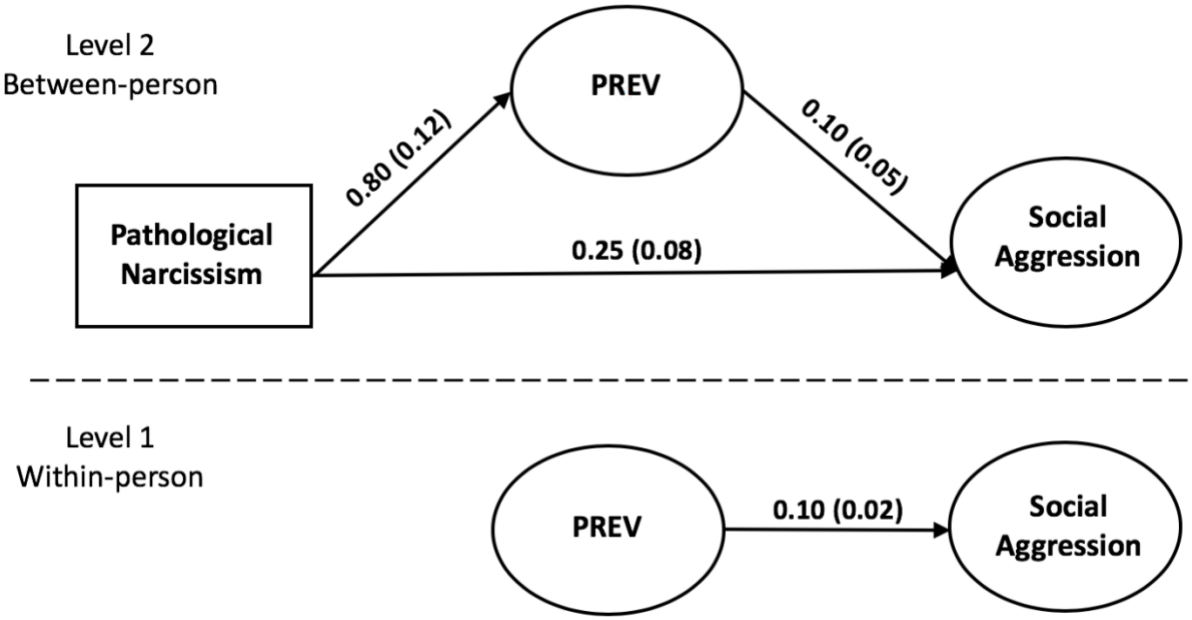
Note. PROMO = promotion focused perfectionistic self-presentation; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 5. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Prevention Focused Perfectionistic Self-presentation.



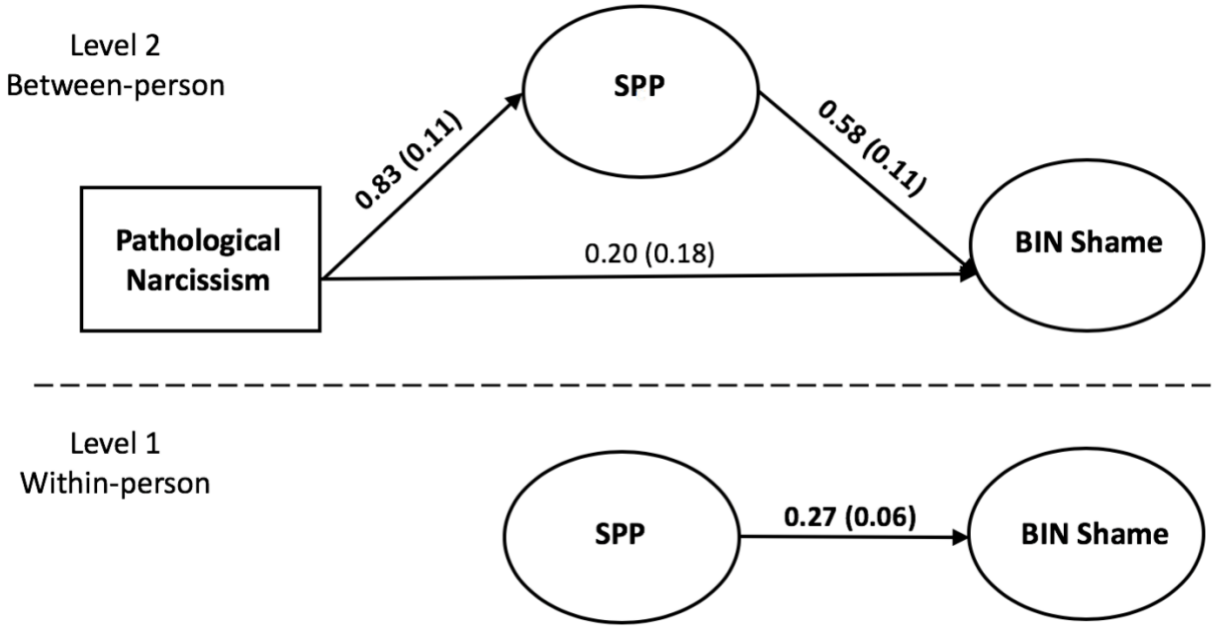
Note. PREV = prevention focused perfectionistic self-presentation; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 6. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of Socially Aggressive Behaviors Mediated by Average Levels of Prevention Focused Perfectionistic Self-presentation.



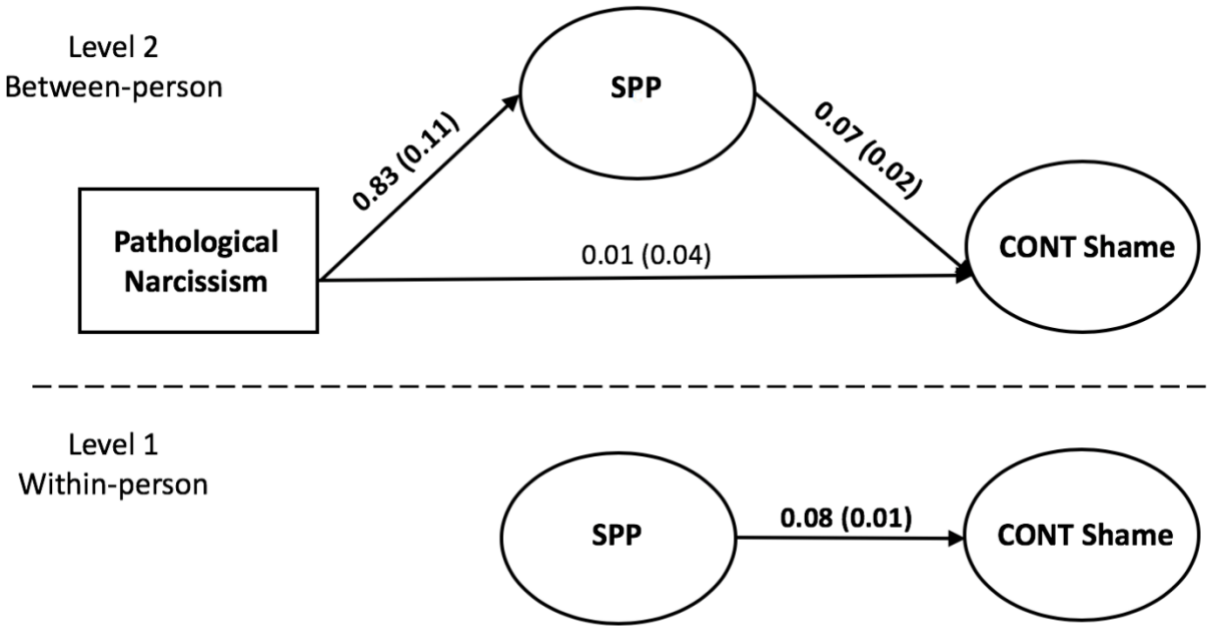
Note. PREV = prevention focused perfectionistic self-presentation. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 7. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Socially Prescribed Perfectionism.



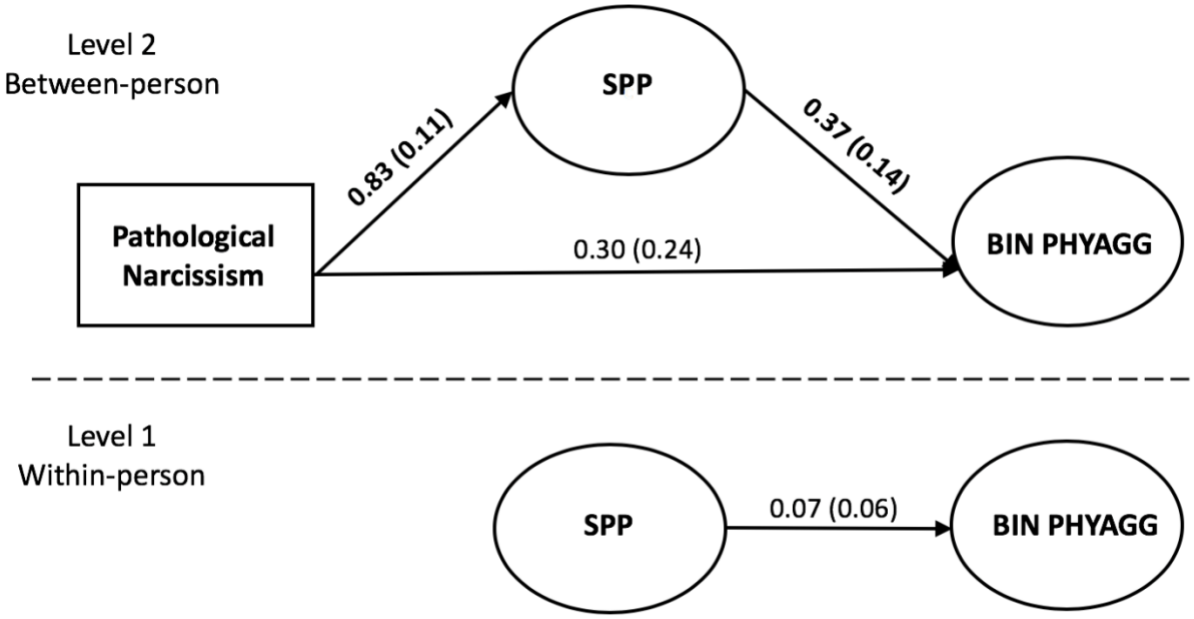
Note. SPP = socially prescribed perfectionism; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 8. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on the Degree to Which an Individual Experiences Average Levels of Weekly Shame Mediated by Average Levels of Socially Prescribed Perfectionism.



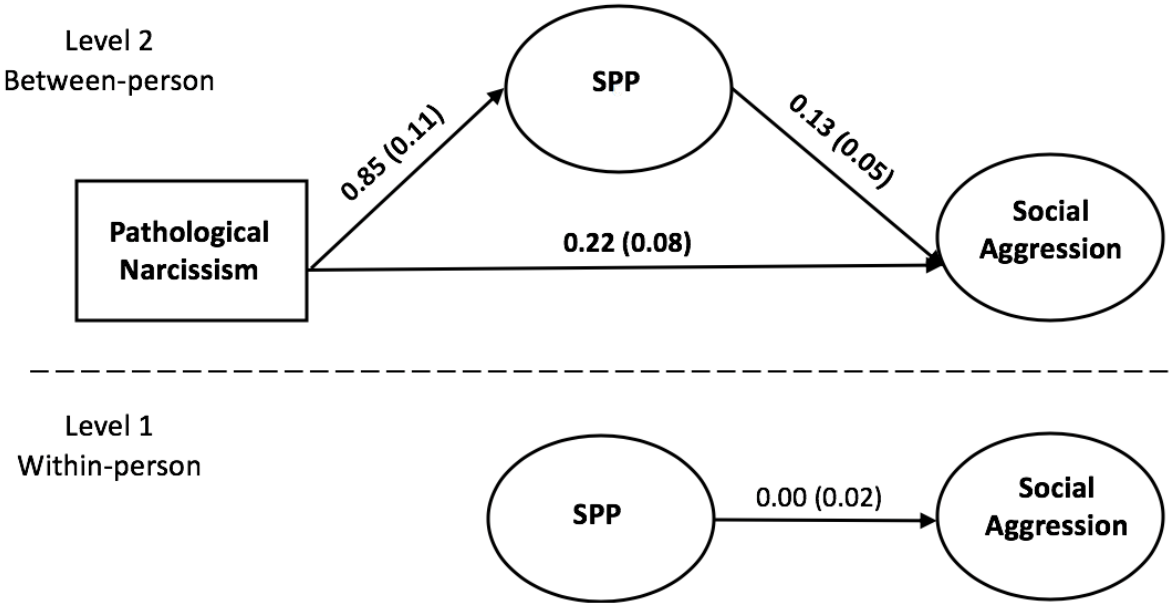
Note. SPP = socially prescribed perfectionism; CONT = continuous outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 9. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Physically Aggressive Feelings on a Given Week Mediated by Average Levels of Socially Prescribed Perfectionism.



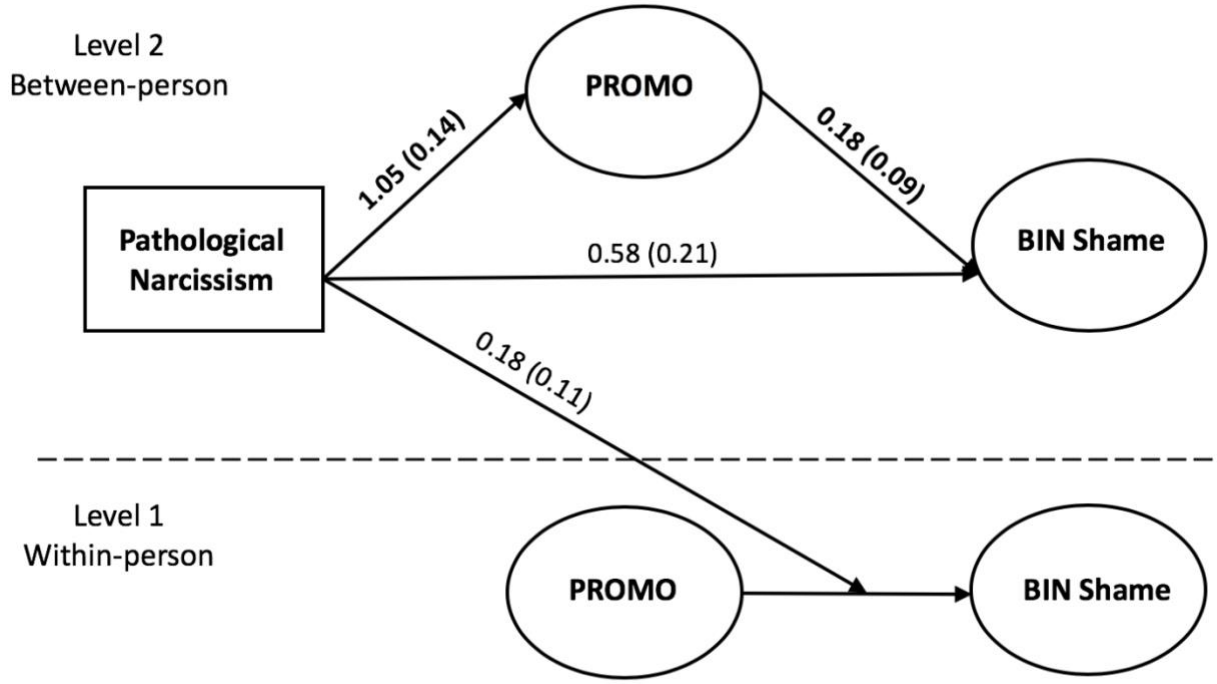
Note. SPP = socially prescribed perfectionism; PHYAGG = physically aggressive feelings; BINARY = outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero.

Figure 10. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of Socially Aggressive Behaviors Mediated by Average Levels of Socially Prescribed Perfectionism.



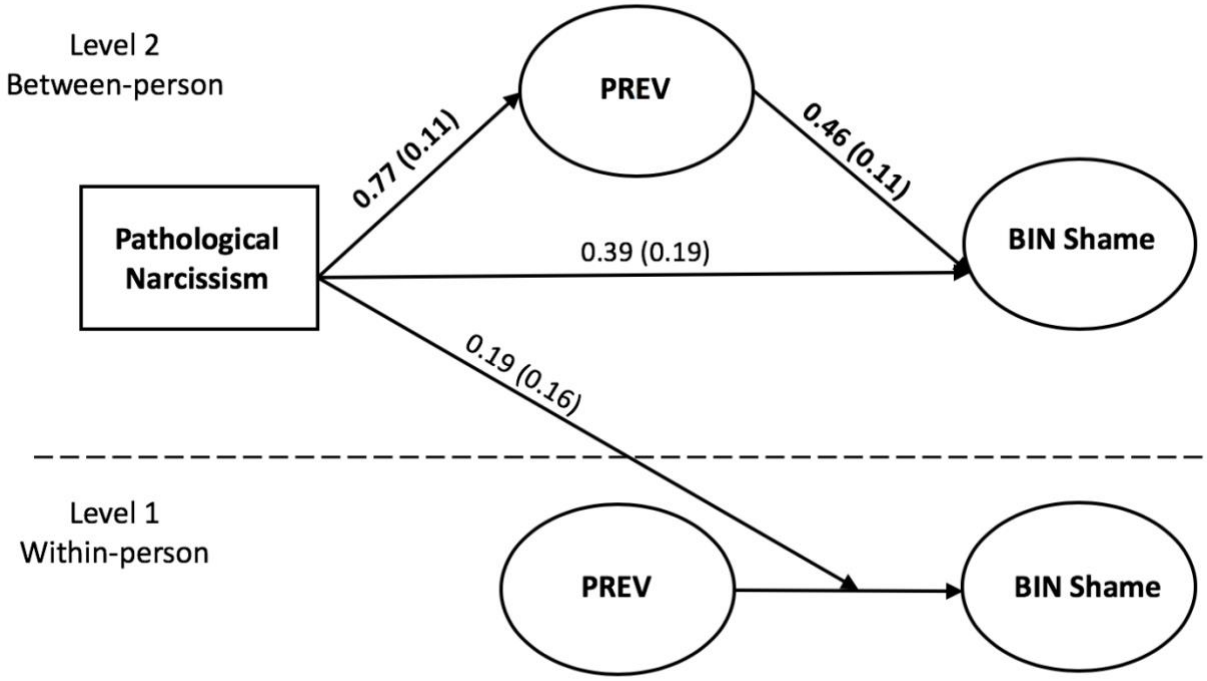
Note. SPP = socially prescribed perfectionism. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Figure 11. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Promotion Focused Perfectionistic Self-presentation, with a Cross-level Interaction of Weekly Promotion Focused Perfectionistic Self-presentation and Pathological Narcissism on Weekly Binary Process of Shame.



Note. PROMO = promotion focused perfectionistic self-presentation; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Figure 12. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Prevention Focused Perfectionistic Self-presentation, with a Cross-level Interaction of Weekly Prevention Focused Perfectionistic Self-presentation and Pathological Narcissism on Weekly Binary Process of Shame.



Note. PREV = prevention focused perfectionistic self-presentation; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Figure 13. Cross-level Interaction of Weekly Promotion Focused Perfectionistic Self-presentation and Pathological Narcissism on Weekly Socially Aggressive Behaviors.

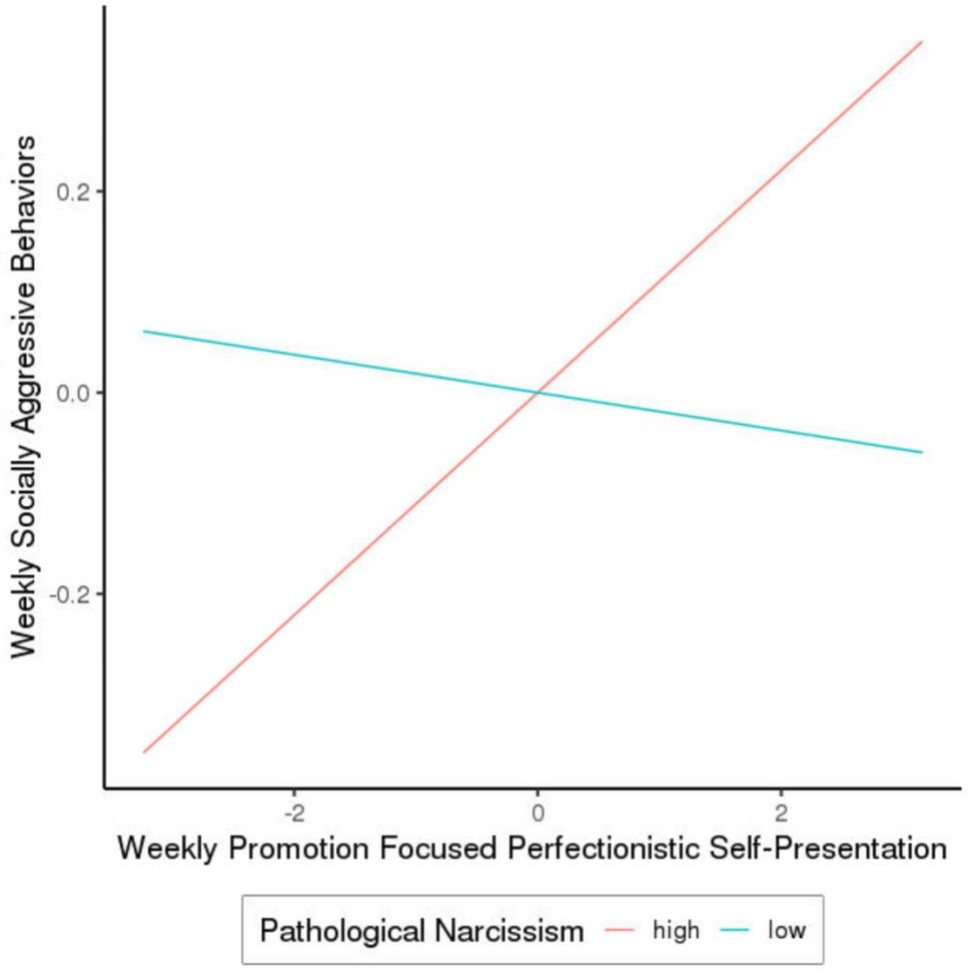


Figure 14. Cross-level Interaction of Weekly Prevention Focused Perfectionistic Self-presentation and Pathological Narcissism on Weekly Socially Aggressive Behaviors.

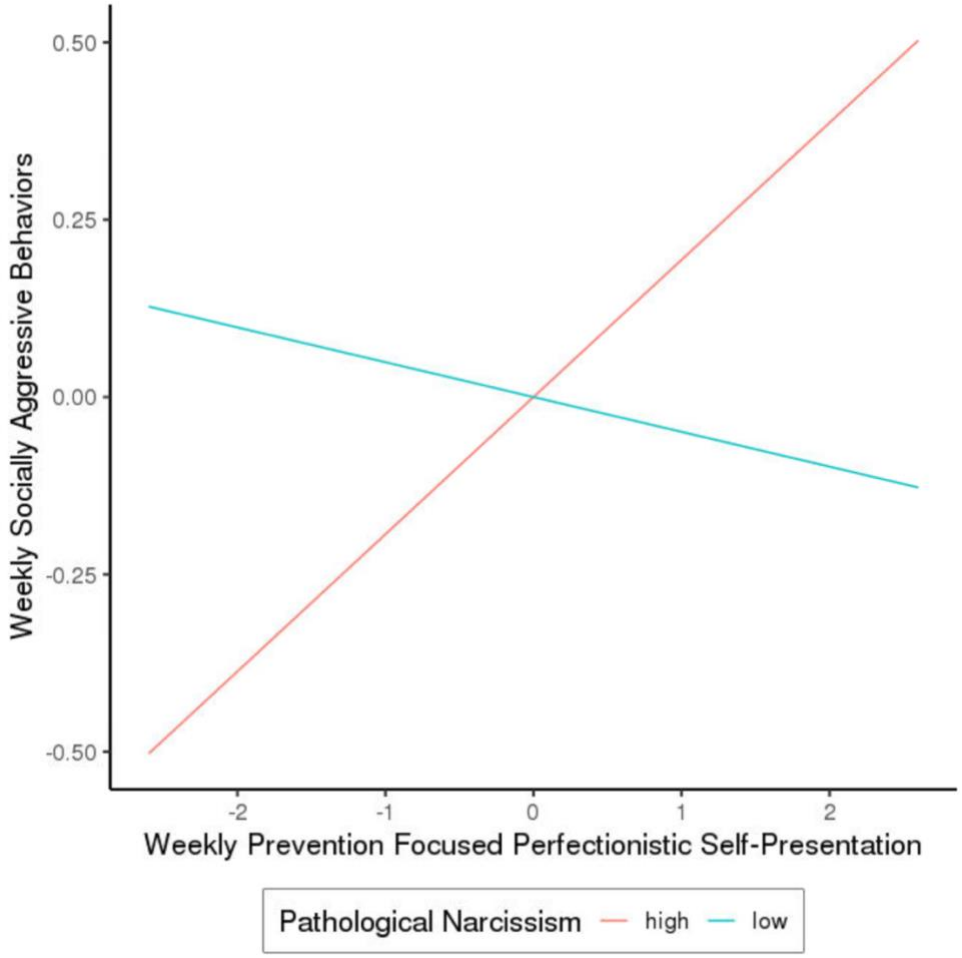
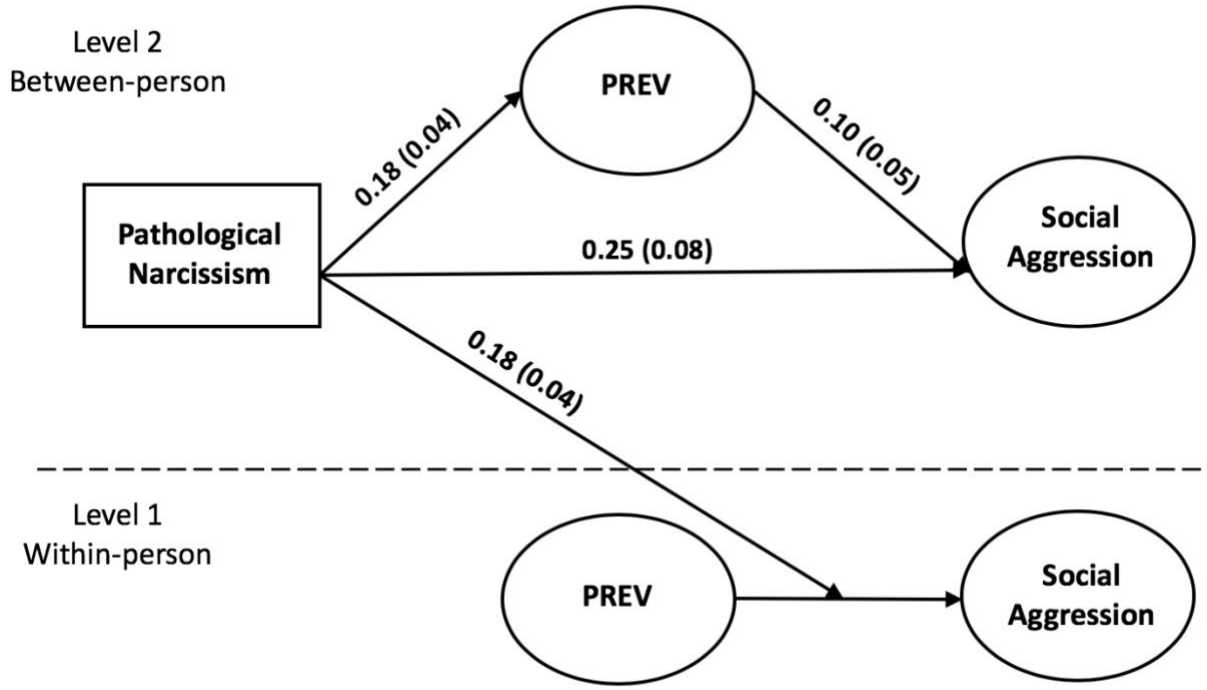
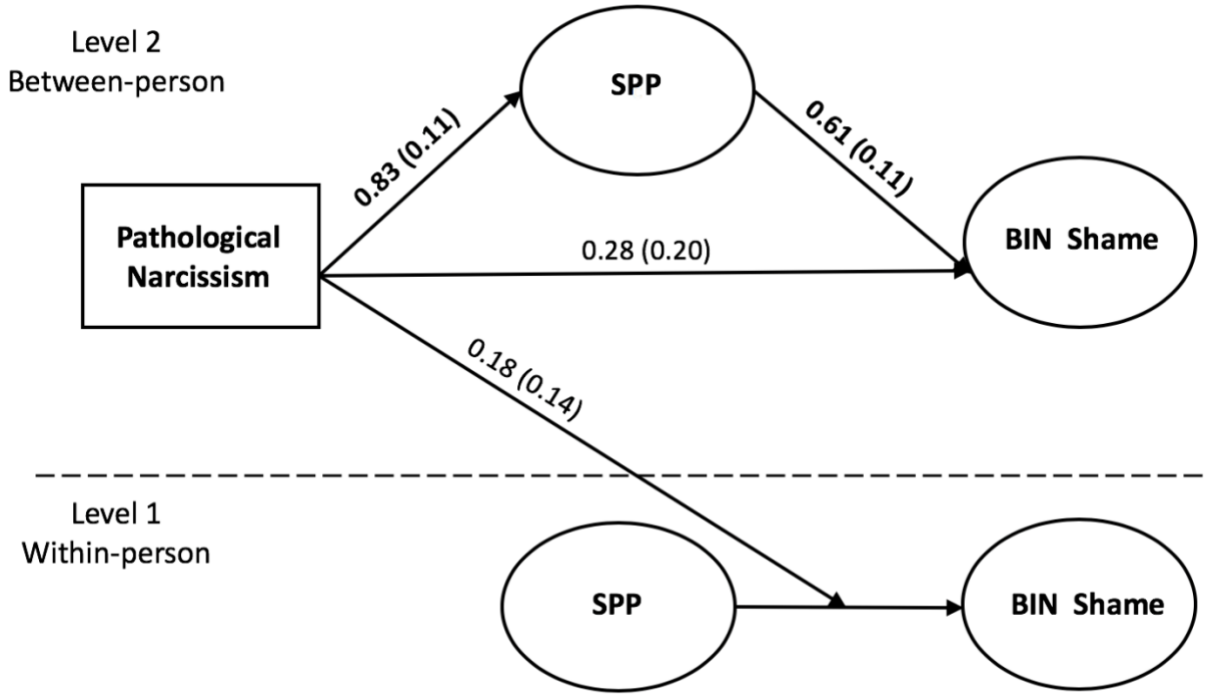


Figure 15. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of Socially Aggressive Behaviors Mediated by Average Levels of Prevention Focused Perfectionistic Self-presentation, with a Cross-level Interaction of Weekly Prevention Focused Perfectionistic Self-presentation and Pathological Narcissism on Weekly Socially Aggressive Behaviors.



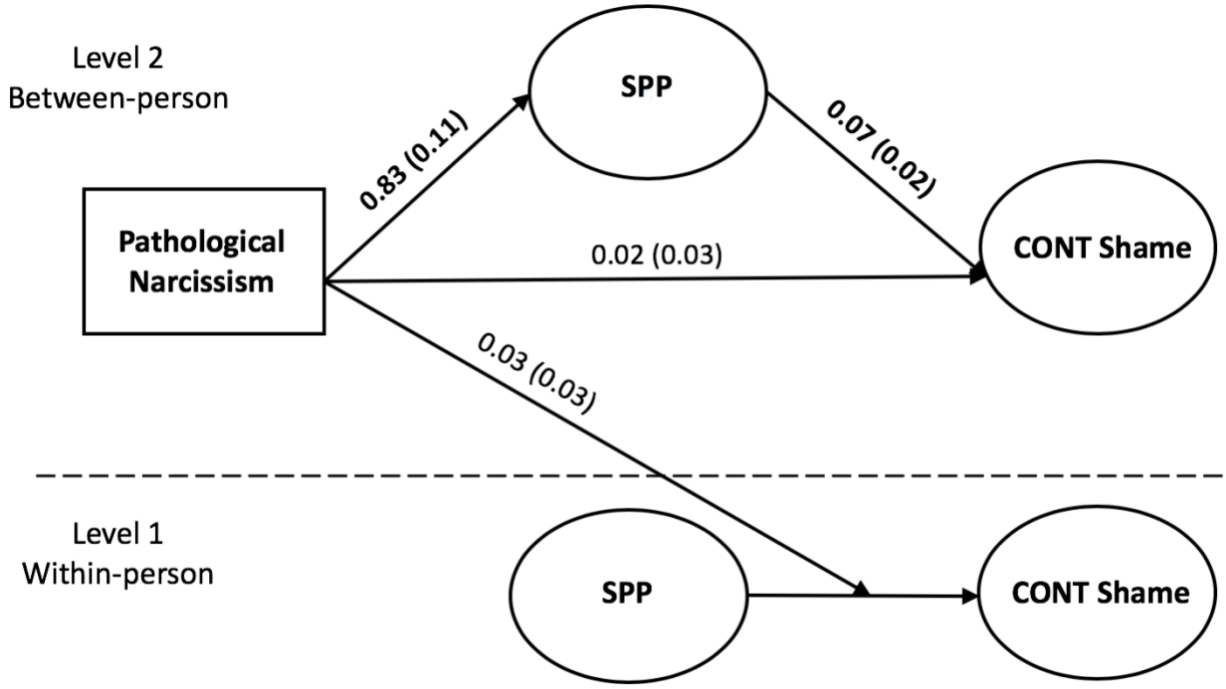
Note. PREV = prevention focused perfectionistic self-presentation. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Figure 16. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Socially Prescribed Perfectionism, with a Cross-level Interaction of Weekly Socially Prescribed Perfectionism and Pathological Narcissism on Weekly Binary Process of Shame.



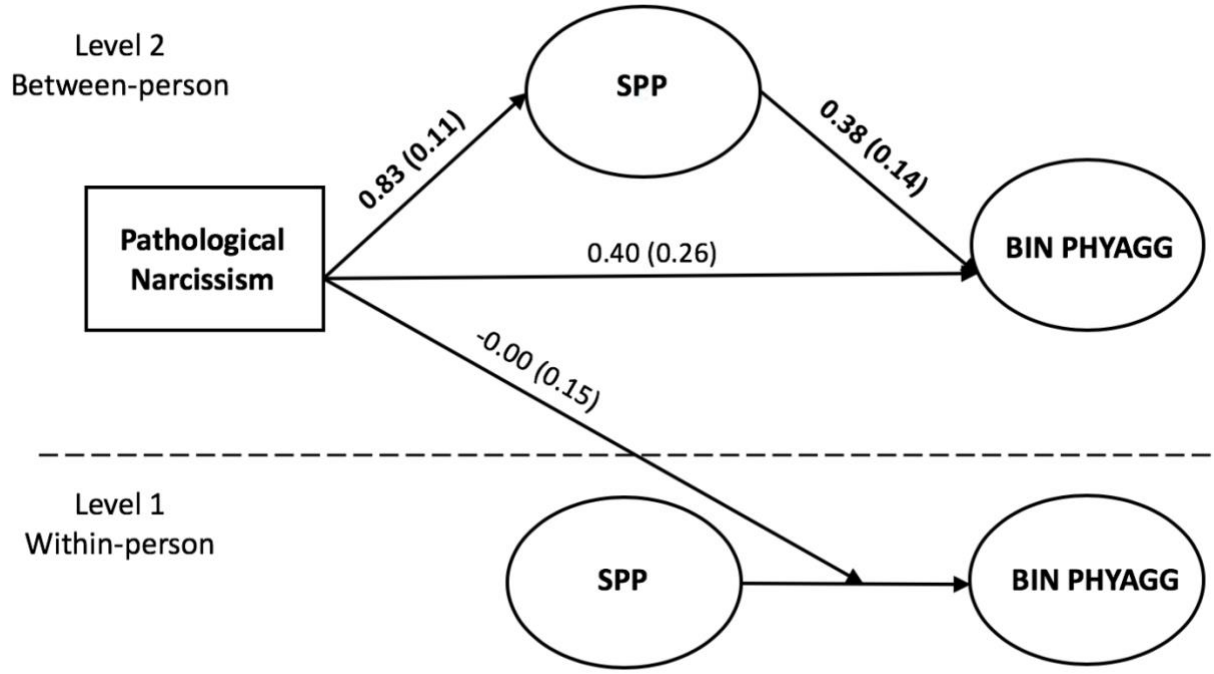
Note. SPP = socially prescribed perfectionism; BIN = binary outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Figure 17. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Shame on a Given Week Mediated by Average Levels of Socially Prescribed Perfectionism, with a Cross-level Interaction of Weekly Socially Prescribed Perfectionism and Pathological Narcissism on Weekly Continuous Process of Shame.



Note. SPP = socially prescribed perfectionism; CONT = continuous outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Figure 18. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of the Likelihood of Experiencing Physically Aggressive Feelings on a Given Week Mediated by Average Levels of Socially Prescribed Perfectionism, with a Cross-level Interaction of Weekly Socially Prescribed Perfectionism and Pathological Narcissism on Weekly Binary Process of Physically Aggressive Feelings.



Note. SPP = socially prescribed perfectionism; PHYAGG = physically aggressive feelings; BINARY = outcome variable. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00). For simplicity, within-person covariate of time is excluded from diagram.

Figure 19. Cross-level Interaction of Weekly Self-oriented Perfectionism and Pathological Narcissism on Weekly Socially Aggressive Behaviors.

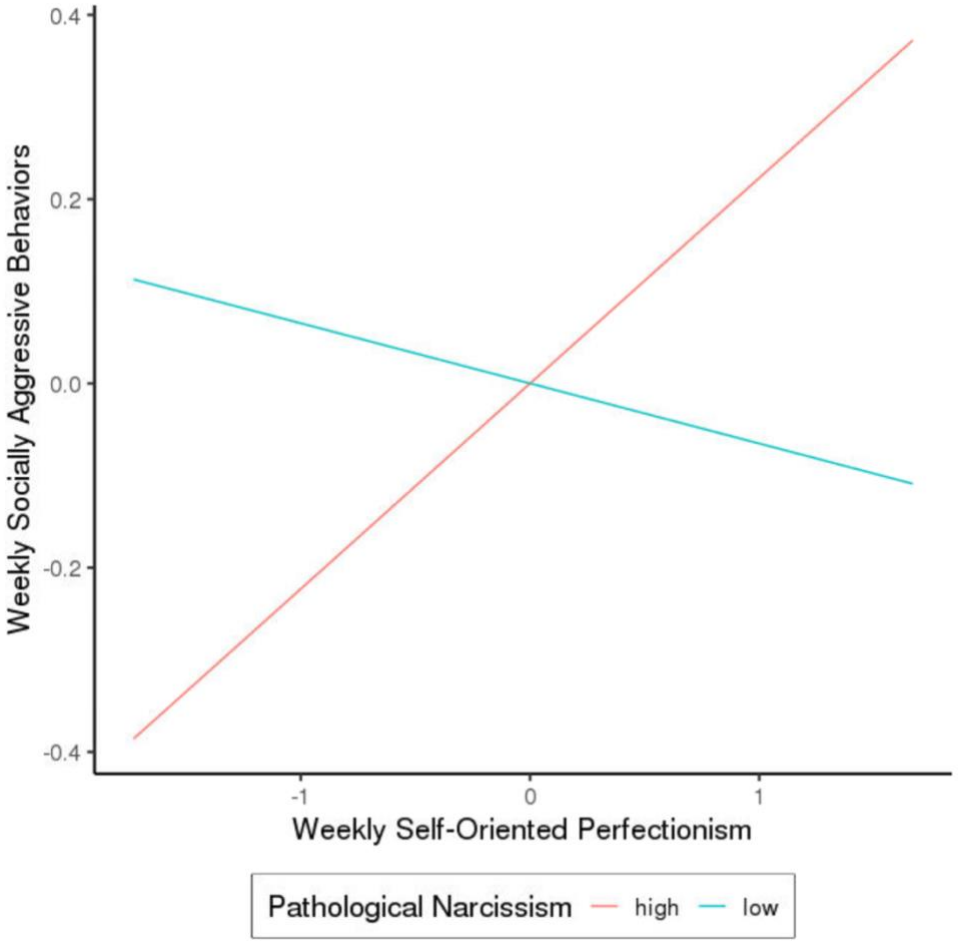


Figure 20. Cross-level Interaction of Weekly Socially Prescribed Perfectionism and Pathological Narcissism on Weekly Socially Aggressive Behaviors.

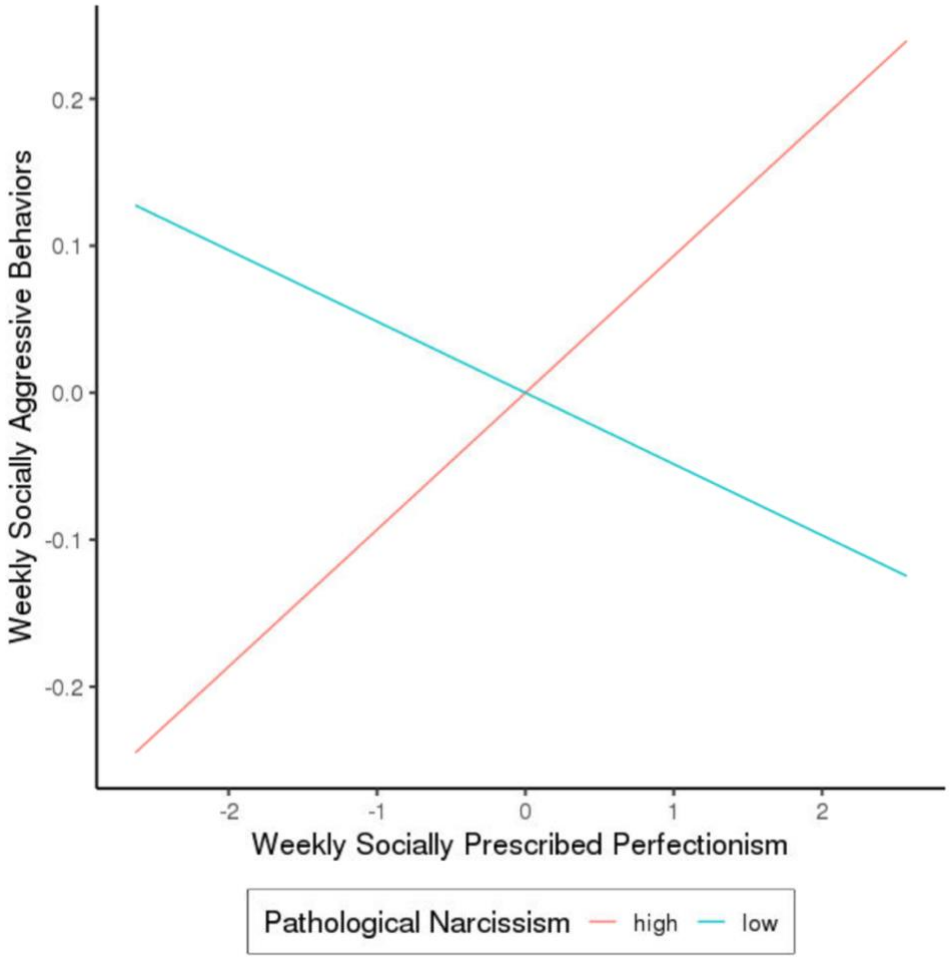
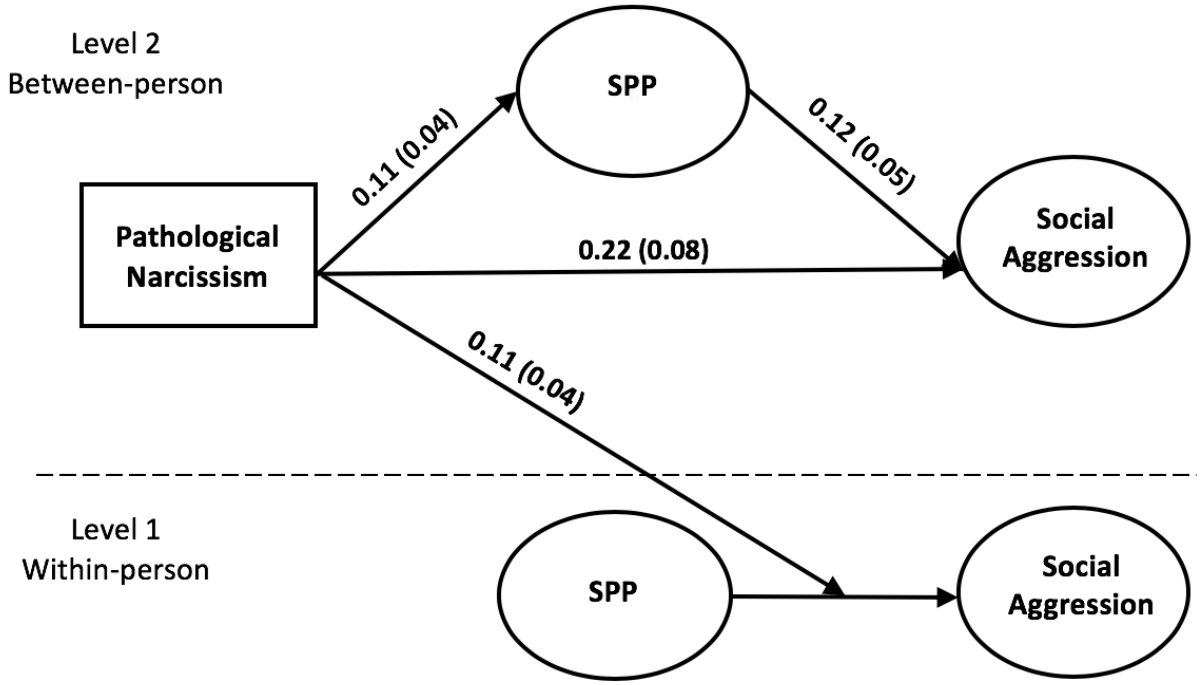


Figure 21. Unstandardized Coefficients (Standard Estimates) for the 2-1-1 Mediation Multilevel Structural Equation Model Examining the Indirect Effect of Pathological Narcissism on Average Levels of Socially Aggressive Behaviors Mediated by Average Levels of Socially Prescribed Perfectionism, with a Cross-level Interaction of Weekly Socially Prescribed Perfectionism and Pathological Narcissism on Weekly Socially Aggressive Behaviors.



Note. SPP = socially prescribed perfectionism. Rectangle depicts observed variable. Circles depict latent variables. Arrows represent regression paths. Values in bold are those for which the credibility interval did not include zero. For simplicity, within-person covariate of time is excluded from diagram.

Appendix B

Tables

Table 1. A Summary of Mediation Hypotheses.

Hypotheses (H)	Mediation Hypotheses	Study Findings
H1a	Pathological narcissism will be positively related to average levels of shame.	Fully supported
H1b	Average levels of weekly promotion focused self-presentation will at least partially mediate the relationship between narcissism and average levels of weekly shame.	Partially supported
H1c	Average levels of weekly prevention focused self-presentation will at least partially mediate the relationship between narcissism and average levels of weekly shame.	Partially supported
H2a	Pathological narcissism will be positively related to average levels of physically aggressive feelings.	Fully supported
H2b	Average levels of weekly promotion focused self-presentation will at least partially mediate the relationship between pathological narcissism and average levels of weekly physical aggressive feelings.	Unsupported
H2c	Average levels of weekly prevention focused self-presentation will at least partially mediate the relationship between pathological narcissism and average levels of weekly physical aggressive feelings.	Unsupported
H3a	Pathological narcissism will be positively related to average levels of socially aggressive behaviors.	Fully supported
H3b	Average levels of weekly promotion focused self-presentation will at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors.	Unsupported
H3c	Average levels of weekly prevention focused self-presentation will at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors.	Fully supported
H4a	Average levels of weekly SPP is expected to at least partially mediate the relationship between pathological narcissism and average levels of weekly shame.	Fully supported
H4b	Average levels of weekly SOP will be ruled out as a mediator of the association between pathological narcissism and average levels of weekly shame given that average levels of weekly shame is expected to be unrelated to average levels of weekly SOP.	Fully Supported

H4c	Average levels of OOP will be ruled out as a mediator of the association between pathological narcissism and average levels of weekly shame given that average levels of weekly shame is expected to be unrelated to average levels of weekly OOP.	Fully Supported
H5a	Average levels of SPP expected to at least partially mediate the association between pathological narcissism and average levels of weekly physically aggressive feelings.	Partially supported
H5b	Average levels of weekly OOP expected to at least partially mediate the association between pathological narcissism and average levels of weekly physically aggressive feelings.	Unsupported
H5c	Average levels of weekly SOP will be ruled out as a mediator of the association between pathological narcissism and average levels of weekly physically aggressive feelings given that average levels of weekly physically aggressive feelings is expected to be unrelated to average levels of weekly SOP.	Fully supported
H6a	Average levels of weekly OOP is expected to at least partially mediate the relationship between pathological narcissism and average levels of weekly socially aggressive behaviors	Unsupported
H6b	Average levels of weekly SOP will be ruled out as a mediator of the association between pathological narcissism and weekly socially aggressive behaviors given that average levels of socially aggressive behaviors is expected to be unrelated to average levels of weekly SPP.	Fully supported
H6c	SPP will be ruled out as a mediator of the association between pathological narcissism and weekly socially aggressive behaviors given that average levels of socially aggressive behaviors is expected to be unrelated to average levels of weekly SPP.	Unsupported

Table 2. A Summary of Moderation Hypotheses.

Hypotheses (H)	Moderation Hypotheses	Study Findings
H7a.1	There will be a significant random effect for within person associations between weekly promotion focused self-presentation and weekly shame.	Fully supported
H7a.2	Pathological narcissism is expected to *mitigate* the positive association between weekly promotion focused self-presentation and weekly shame.	Unsupported
H7b.1	There will also be a significant random effect for within person associations between weekly prevention focused self-presentation and weekly shame.	Fully supported
H7b.2	Pathological narcissism will *amplify* the positive association between weekly prevention focused self-presentation and weekly shame.	Unsupported
H8a.1	There will be a significant random effect for within person associations between weekly promotion focused self-presentation and weekly physically aggressive behaviors.	Unsupported
H8b.1	There will be a significant random effect for within person associations between weekly prevention focused self-presentation and weekly physically aggressive feelings.	Fully supported
H8a.2	Pathological narcissism will *amplify* the positive association between weekly promotion focused self-presentation and weekly physically aggressive feelings.	Unsupported
H8b.2	Pathological narcissism will *amplify* the positive association between weekly prevention focused self-presentation and weekly physically aggressive feelings.	Unsupported
H9a.1	There will be a significant random effect for within person associations between weekly promotion focused self-presentation and weekly socially aggressive behaviors.	Unsupported
H9b.1	There will be a significant random effect for within person associations between weekly prevention focused self-presentation and weekly socially aggressive behaviors.	Fully supported
H9a.2	Pathological narcissism will *amplify* the positive association between weekly promotion focused self-presentation and weekly socially aggressive behaviors.	Fully supported

H9b.2	Pathological narcissism will *amplify* the positive association between weekly prevention focused self-presentation and weekly socially aggressive behaviors.	Fully supported
H10a.1	There will not be a significant random effect for within person associations between weekly SOP and weekly shame.	Fully supported
H10b.1	There will not be a significant random effect for within person associations between weekly OOP and weekly shame.	Unsupported
H10a.2	There will be no moderation effect of pathological narcissism on weekly SOP and weekly shame.	Fully supported
H10.b2	There will be no moderation effect of pathological narcissism on weekly OOP and weekly shame.	Fully supported
H10c.1	There will also be a significant random effect for within person associations between SPP and weekly shame.	Fully supported
H10c.2	Pathological narcissism will *amplify* the positive association between weekly SPP and weekly shame.	Unsupported
H11a.1	There will not be a significant random effect for within person associations between weekly SOP and weekly physically aggressive feelings.	Partially supported
H11a.2	There will be no moderation effect of pathological narcissism on weekly SOP and weekly physically aggressive feelings.	Fully Supported
H11b.1	There will be a significant random effect for within person associations between weekly SPP and weekly physically aggressive feelings.	Partially supported
H11c.1	There will be a significant random effect for within person associations between weekly OOP and weekly physically aggressive feelings.	Unsupported
H11b.2	Pathological narcissism is expected to *amplify* the positive relationship between weekly SPP and weekly physically aggressive feelings.	Unsupported
H11c.2	Pathological narcissism is expected to *amplify* the positive relationship between weekly OOP and weekly physically aggressive feelings.	Unsupported
H12a.1	There will not be a significant random effect for within person associations between weekly SOP and weekly socially aggressive behaviors.	Unsupported
H12.b1	There will not be a significant random effect for within person associations between weekly SPP and weekly socially aggressive behaviors.	Fully supported

H12a.2	There will be no moderation effect of pathological narcissism on weekly SOP and weekly socially aggressive behaviors.	Unsupported
H12b.2	There will be no moderation effect of pathological narcissism on weekly SPP and weekly socially aggressive behaviors.	Unsupported
H12c.1	There will be a significant random effect for within person associations between weekly OOP and weekly socially aggressive behaviors.	Unsupported
H12c.2	Pathological narcissism will *amplify* the positive association between weekly OOP and weekly socially aggressive behaviors.	Unsupported

Table 3. Descriptive Statistics and Correlations at the Between-person and Within-person Level.

Correlations		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. PN		-								
2. SOP		**0.38**	-	0.05	**0.28**	**0.34**	**0.21**	**0.07**	**0.07**	**0.07**
3. OOP		-0.13	**-0.17**	-	-0.05	0.04	-0.03	-0.05	-0.03	-0.02
4. SPP		**0.49**	**0.69**	**-0.23**	-	**0.31**	**0.26**	**0.19**	**0.08**	0.00
5. PROMO		**0.49**	**0.77**	**-0.22**	**0.78**	-	**0.40**	**0.12**	0.02	0.04
6. PREV		**0.45**	**0.49**	**-0.39**	**0.66**	**0.70**	-	**0.17**	**0.12**	**0.11**
7. Shame		**0.28**	**0.17**	-0.07	**0.46**	**0.27**	**0.37**	-	**0.15**	**0.12**
8. PHYAGG		**0.25**	0.02	-0.04	**0.26**	0.13	**0.17**	**0.35**	-	**0.31**
9. SOCAGG		**0.32**	-0.00	**-0.22**	**0.32**	**0.18**	**0.28**	**0.31**	**0.54**	-
Descriptives										
	M	2.65	4.30	4.43	3.29	3.86	3.95	1.56	1.55	2.08
	SD	0.44	0.75	1.25	1.73	2.61	1.69	0.74	0.72	0.71

Note. Person-level N = 195; weekly-level N = 1,533; between-persons standardized correlation coefficients are reported *below* the diagonal; within-person standardized correlation coefficients are shown *above* the diagonal; Values in bold are those for which the 95% credibility interval excluded zero (values below -0.005 were rounded down to 0.00 and values below 0.005 were rounded down to 0.00). PN = pathological narcissism; SOP = self- oriented perfectionism; OOP = other-oriented perfectionism; SPP= socially prescribed perfectionism; PROMO = promotion focused perfectionistic self-presentation; PREV = prevention focused perfectionistic self-presentation; PHYAGG = physically aggressive feelings; SOCAGG= social aggression; *M* = mean; *SD* = standard deviation.

Table 4. Within-person Variances, Between-person Variances, and Intraclass Correlations among the Weekly Study Variables.

Variable	Within-person Unstnd. (SE)	Between-person Unstnd. (SE)	ICC
SOP	0.25 (0.02)	0.50 (0.04)	0.67
OOP	0.40 (0.03)	0.84 (0.10)	0.68
SPP	0.44 (0.03)	1.27 (0.12)	0.74
PROMO	0.58 (0.04)	2.05 (0.16)	0.78
PREV	0.33 (0.02)	1.34 (0.12)	0.80
Shame	0.31 (0.03)	0.43 (0.07)	0.59
PHYAGG	0.31 (0.03)	0.42 (0.05)	0.57
SOCAGG	0.27 (0.02)	0.43 (0.04)	0.62

Note. 1,787 to 1,790 weekly observations from 228 participants. Unstnd. = Unstandardized; SE= Standard Error; ICC = Intraclass Correlation; SOP = self- oriented perfectionism; OOP = other-oriented perfectionism; SPP= socially prescribed perfectionism; PROMO = promotion focused perfectionistic self-presentation; PREV = prevention focused perfectionistic self-presentation; PHYAGG = physically aggressive feelings; SOCAGG= social aggression.

Table 5. Multilevel Structural Equation Model Predicting Average Levels of Weekly Feelings of Shame from Pathological Narcissism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odd Ratio
Between-person Model				
PN → BIN Shame	0.67	0.16	**0.39; 1.02**	1.95
PN → CONT Shame	0.07	0.03	**0.00; 0.13**	-
Intercept CONT Shame	0.05	0.09	**0.36; 0.71**	-
Threshold BIN Shame	2.08	0.44	**1.23; 2.96**	8.00
Variance PN	0.45	0.05	**0.37; 0.56**	-
Residual variance BIN Shame	1.78	0.28	**1.32; 2.42**	3.17
Residual variance CONT Shame	0.04	0.07	**1.32; 2.42**	-
Within-person Model	0.04	0.01	**0.03; 2.42**	
Variance CONT Shame	0.06	0.00	**0.06; 0.07**	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 6. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Shame from Pathological Narcissism and Average Levels of Weekly Promotion Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PROMO (path a)	1.05	0.14	**0.78; 1.31**	-
PROMO → BIN Shame (path bb)	0.16	0.08	**0.01; 0.33**	1.17
PN→ BIN Shame	0.51	0.19	**0.14; 0.88**	1.67
PROMO → CONT Shame (path bc)	0.01	0.02	-0.02; 0.04	-
PN → CONT Shame	0.05	0.04	-0.02; 0.12	-
Intercept PROMO	1.06	0.37	**0.33; 1.80**	-
Intercept CONT Shame	0.54	0.09	**0.36; 0.72**	-
Threshold BIN Shame	2.20	0.45	**1.34; 3.09**	
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PROMO	1.60	0.17	**1.31; 2.00**	-
Residual variance BIN Shame	1.79	0.28	**1.33; 2.43**	5.99
Residual variance CONT Shame	0.05	0.01	**0.03; 0.06**	-
Within-person Model				
PROMO → BIN Shame	0.13	0.05	**0.03; 0.24**	1.14
PROMO → CONT Shame	0.06	0.01	**0.03; 0.08**	-
Variance PROMO	0.58	0.02	**0.54; 0.62**	-
Residual variance CONT Shame	0.06	0.00	**0.06; 0.07**	-
Indirect effect (path a*path bb)	0.17	0.09	**0.00; 0.36**	1.19
Indirect effect (path a* path bc)	0.01	0.02	-0.03; 0.04	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PROMO = promotion focused perfectionistic self-presentation; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 7. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Shame from Pathological Narcissism and Average Levels of Weekly Prevention Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PREV (path a)	0.77	0.11	**0.55; 0.99**	-
PREV → BIN Shame (path bb)	0.43	0.10	**0.24; 0.62**	1.54
PN→ BIN Shame	0.33	0.18	-0.01; 0.68	1.39
PREV → CONT Shame (path bc)	0.03	0.02	-0.01; 0.07	-
PN → CONT Shame	0.04	0.04	-0.03; 0.11	-
Intercept PREV	1.90	0.31	**1.30; 2.51**	-
Intercept CONT Shame	0.47	0.10	**0.27; 0.67**	-
Threshold BIN Shame	2.79	0.47	**1.89; 3.72**	16.28
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PREV	1.10	0.11	**0.91; 1.35**	-
Residual variance BIN Shame	1.66	0.26	**1.23; 2.26**	5.26
Residual variance CONT Shame	0.05	0.01	**0.03; 0.06**	-
Within-person Model				
PREV → BIN Shame	0.34	0.07	**0.20; 0.47**	1.40
PREV → CONT Shame	0.07	0.02	**0.04; 0.11**	-
Variance PREV	0.33	0.01	**0.31; 0.36**	-
Residual variance CONT Shame	0.06	0.00	**0.06; 0.07**	-
Indirect effect (path a*path bb)	0.32	0.09	**0.16; 0.52**	1.38
Indirect effect (path a* path bc)	0.02	0.02	-0.00; 0.06	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PREV = prevention focused perfectionistic self-presentation; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome

Table 8. Multilevel Structural Equation Model Predicting Average Levels of Weekly Feelings of Physical Aggression from Pathological Narcissism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → BIN PHYAGG	0.61	0.21	**0.20; 1.01**	**1.84**
PN → CONT PHYAGG	0.08	0.03	**0.03; 0.12**	**-**
Intercept CONT PHYAGG	0.68	0.07	**0.54; 0.81**	**-**
Threshold BIN PHYAGG	2.35	0.57	**1.25; 3.49**	**10.49**
Variance PN	0.45	0.05	**0.37; 0.56**	**-**
Residual variance BIN PHYAGG	3.05	0.52	**2.22; 4.26**	**21.12**
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.02**	**-**
Within-person Model				
Variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	**-**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 9. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Physically Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Promotion Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PROMO (path a)	1.04	0.14	**0.77; 1.31**	-
PROMO → BIN PHYAGG (path bb)	-0.01	0.11	-0.23; 0.21	0.99
PN → BIN PHYAGG	0.62	0.25	**0.12; 1.10**	1.86
PROMO → CONT PHYAGG (path bc)	-0.02	0.01	-0.04; 0.01	-
PN → CONT PHYAGG	0.09	0.03	**0.03; 0.15**	-
Intercept PROMO	1.08	0.38	**0.35; 1.82**	-
Intercept CONT PHYAGG	0.72	0.07	**0.58; 0.86**	-
Threshold BIN PHYAGG	2.34	0.58	**1.24; 3.50**	10.38
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PROMO	1.60	0.17	**1.32; 1.97**	-
Residual variance BIN PHYAGG	3.12	0.54	**2.26; 4.37**	22.65
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.02**	-
Within-person Model				
PROMO → BIN PHYAGG	0.02	0.06	-0.09; 0.14	1.02
PROMO → CONT PHYAGG	0.01	0.01	-0.02; 0.03	-
Variance PROMO	0.58	0.02	**0.54; 0.62**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	-0.01	0.12	-0.24; 0.22	0.99
Indirect effect (path a* path bc)	-0.02	0.01	-0.05; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PROMO = promotion focused perfectionistic self-presentation; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 10. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Physically Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Prevention Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PREV (path a)	0.76	0.11	**0.54; 0.98**	-
PREV → BIN PHYAGG (path bb)	0.03	0.13	-0.23; 0.29	1.03
PN → BIN PHYAGG	0.56	0.24	**0.10; 1.03**	1.75
PREV → CONT PHYAGG (path bc)	-0.00	0.01	-0.03; 0.03	-
PN → CONT PHYAGG	0.07	0.03	**0.01; 0.12**	-
Intercept PREV	1.92	0.31	**1.31; 2.53**	-
Intercept CONT PHYAGG	0.69	0.07	**0.55; 0.84**	-
Threshold BIN PHYAGG	2.35	0.62	**1.17; 3.58**	10.49
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PREV	1.11	0.11	**0.92; 1.36**	-
Residual variance BIN PHYAGG	3.16	0.54	**2.29; 4.42**	23.57
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.03**	-
Within-person Model				
PREV → BIN PHYAGG	0.23	0.08	**0.07; 0.38**	1.26
PREV → CONT PHYAGG	0.05	0.02	**0.02; 0.08**	-
Variance PREV	0.33	0.01	**0.31; 0.36**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	0.02	0.10	-0.18; 0.22	1.02
Indirect effect (path a* path bc)	0.00	0.01	-0.02; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PREV = prevention focused perfectionistic self-presentation; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 11. Multilevel Structural Equation Model Predicting Average Levels of Weekly Socially Aggressive Behaviors from Pathological Narcissism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → SOCAGG	0.32	0.07	**0.18; 0.47**
Intercept SOCAGG	1.22	0.20	**0.83; 1.61**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance SOCAGG	0.42	0.05	**0.34; 0.53**
Within-person Model			
Variance SOCAGG	0.26	0.01	**0.24; 0.28**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SOCAGG = socially aggressive behaviors; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of engaging in socially aggressive behaviors) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 12. Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Socially Aggressive Behaviors from Pathological Narcissism and Average Levels of Weekly Promotion Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → PROMO (path a)	1.06	0.14	**0.79; 1.33**
PROMO → SOCAGG (path b)	0.01	0.04	-0.07; 0.09
PN → SOCAGG	0.31	0.08	**0.14; 0.47**
Intercept PROMO	1.04	0.38	**0.29; 1.79**
Intercept SOCAGG	1.21	0.20	**0.82; 1.61**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance PROMO	1.59	0.17	**1.30; 1.98**
Residual variance SOCAGG	0.42	0.05	**0.34; 0.53**
Within-person Model			
PROMO → SOCAGG	0.03	0.02	-0.01; 0.06
Variance PROMO	0.57	0.02	**0.53; 0.61**
Residual variance SOCAGG	0.26	0.01	**0.24; 0.28**
Indirect effect (path a*path b)	0.02	0.04	-0.07; 0.10

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PROMO = promotion focused perfectionistic self-presentation; SOCAGG = socially aggressive behaviors. Values in bold are those for which the credibility interval did not include zero.

Table 13. Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Socially Aggressive Behaviors from Pathological Narcissism and Average Levels of Weekly Prevention Focused Perfectionistic Self-presentation.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → PREV (path a)	0.80	0.12	**0.57; 1.03**
PREV → SOCAGG (path b)	0.10	0.05	**0.01; 0.19**
PN → SOCAGG	0.25	0.08	**0.09; 0.41**
Intercept PREV	1.83	0.32	**1.20; 2.46**
Intercept SOCAGG	1.05	0.22	**0.63; 1.47**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance PREV	1.13	0.12	**0.93; 1.40**
Residual variance SOCAGG	0.41	0.05	**0.33; 0.51**
Within-person Model			
PREV→ SOCAGG	0.10	0.02	**0.05; 0.14**
Variance PREV	0.32	0.01	**0.30; 0.35**
Residual variance SOCAGG	0.25	0.01	**0.24; 0.28**
Indirect effect (path a*path b)	0.07	0.04	**0.00; 0.16**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; PREV = prevention focused perfectionistic self-presentation; SOCAGG = socially aggressive behaviors. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 14. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Shame from Pathological Narcissism and Average Levels of Weekly Socially Prescribed Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SPP (path a)	0.83	0.11	**0.62; 1.04**	-
SPP → BIN Shame (path bb)	0.58	0.11	**0.38; 0.79**	1.79
PN→ BIN Shame	0.20	0.18	-0.15; 0.54	1.22
SPP → CONT Shame (path bc)	0.07	0.02	**0.03; 0.11**	-
PN → CONT Shame	0.01	0.04	-0.06; 0.08	-
Intercept SPP	1.09	0.29	**0.52; 1.67**	-
Intercept CONT Shame	0.42	0.09	**0.24; 0.60**	-
Threshold BIN Shame	2.65	0.44	**1.81; 3.52**	14.15
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SPP	0.99	0.10	**0.81; 1.22**	-
Residual variance BIN Shame	1.54	0.25	**1.14; 2.10**	4.66
Residual variance CONT Shame	0.04	0.01	**0.03; 0.05**	-
Within-person Model				
SPP → BIN Shame	0.27	0.06	**0.16; 0.39**	1.31
SPP → CONT Shame	0.08	0.01	**0.05; 0.11**	-
Variance SPP	0.45	0.02	**0.42; 0.48**	-
Residual variance CONT Shame	0.06	0.00	**0.05; 0.07**	-
Indirect effect (path a*path bb)	0.47	0.11	**0.29; 0.71**	1.60
Indirect effect (path a* path bc)	0.06	0.02	**0.03; 0.10**	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SPP = socially prescribed perfectionism; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 15. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Shame from Pathological Narcissism and Average Levels of Weekly Self-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SOP (path a)	0.39	0.07	**0.25; 0.53**	-
SOP → BIN Shame (path bb)	0.01	0.16	-0.30; 0.32	1.01
PN→ BIN Shame	0.69	0.18	**0.34; 1.04**	1.99
SOP → CONT Shame (path bc)	-0.01	0.03	-0.07; 0.05	-
PN → CONT Shame	0.07	0.04	-0.00; 0.14	-
Intercept SOP	3.24	0.20	**2.85; 3.63**	-
Intercept CONT Shame	0.58	0.13	**0.32; 0.84**	-
Threshold BIN Shame	2.07	0.65	**0.82; 3.35**	7.92
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SOP	0.44	0.05	**0.36; 0.55**	-
Residual variance BIN Shame	1.81	0.29	**1.34; 2.46**	
Residual variance CONT Shame	0.04	0.01	**0.03; 0.06**	-
Within-person Model				
SOP → BIN Shame	0.09	0.08	-0.06; 0.25	1.09
SOP → CONT Shame	0.04	0.02	-0.00; 0.08	-
Variance SOP	0.25	0.01	**0.23; 0.26**	-
Residual variance CONT Shame	0.06	0.00	**0.06; 0.07**	-
Indirect effect (path a*path bb)	0.00	0.06	-0.12; 0.13	1
Indirect effect (path a* path bc)	-0.00	0.01	-0.03; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SOP = self-oriented perfectionism; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 16. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Shame from Pathological Narcissism and Average Levels of Weekly Other-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → OOP (path a)	-0.18	0.10	-0.37; 0.02	-
OOP → BIN Shame (path bb)	-0.16	0.11	-0.38; 0.06	0.85
PN → BIN Shame	0.69	0.16	**0.37; 1.01**	1.99
OOP → CONT Shame (path bc)	-0.01	0.02	-0.05; 0.04	-
PN → CONT Shame	0.07	0.03	**0.01; 0.13**	-
Intercept OOP	4.95	0.27	**4.41; 5.48**	-
Intercept CONT Shame	0.56	0.14	**0.28; 0.83**	-
Threshold BIN Shame	1.34	0.88	-0.00; 2.70	3.82
Variance PN	0.45	0.05	**0.37; 0.56**	-
Residual variance OOP	0.85	0.09	**0.70; 1.04**	-
Residual variance BIN Shame	1.80	0.29	**1.33; 2.45**	6.05
Residual variance CONT Shame	0.04	0.01	**0.03; 0.06**	-
Within-person Model				
OOP → BIN Shame	-0.16	0.06	**-0.28; -0.03**	0.85
OOP → CONT Shame	-0.01	0.02	-0.04; 0.02	-
Variance OOP	0.40	0.01	**0.37; 0.43**	-
Residual variance CONT Shame	0.06	0.00	**0.06; 0.07**	-
Indirect effect (path a*path bb)	0.02	0.03	-0.01; 0.09	1.02
Indirect effect (path a* path bc)	0.00	0.01	-0.01; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; OOP = other-oriented perfectionism; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 17. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Physically Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Socially Prescribed Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SPP (path a)	0.83	0.11	**0.61; 1.04**	-
SPP → BIN PHYAGG (path bb)	0.37	0.14	**0.11; 0.65**	1.45
PN→ BIN PHYAGG	0.30	0.24	-0.16; 0.77	1.35
SPP → CONT PHYAGG (path bc)	-0.01	0.02	-0.04; 0.02	-
PN → CONT PHYAGG	0.08	0.03	**0.02; 0.13**	-
Intercept SPP	1.10	0.30	**0.53; 1.68**	-
Intercept CONT PHYAGG	0.70	0.07	**0.56; 0.85**	-
Threshold BIN PHYAGG	2.78	0.58	**1.67; 3.94**	16.12
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SPP	0.99	0.10	**0.82; 1.22**	-
Residual variance BIN PHYAGG	2.94	0.51	**2.13; 4.12**	18.92
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.03**	-
Within-person Model				
SPP → BIN PHYAGG	0.07	0.06	-0.06; 0.19	1.07
SPP → CONT PHYAGG	0.03	0.01	**0.01; 0.06**	-
Variance SPP	0.45	0.02	**0.42; 0.48**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	0.30	0.12	**0.08; 0.56**	1.35
Indirect effect (path a* path bc)	-0.01	0.01	-0.04; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SPP = socially prescribed perfectionism; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 18. Two Part Multilevel Structural Equation Mediation Mode (2-1-1) Predicting Average Levels of Weekly Physically Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Other-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → OOP (path a)	-0.17	0.10	-0.37; 0.03	-
OOP → BIN PHYAGG (path bb)	-0.09	0.15	-0.38; 0.19	0.91
PN→ BIN PHYAGG	0.61	0.21	**0.21; 1.02**	1.84
OOP → CONT PHYAGG (path bc)	-0.01	0.02	-0.04; 0.02	-
PN → CONT PHYAGG	0.07	0.03	**0.02; 0.12**	-
Intercept OOP	4.93	0.27	**4.39; 5.47**	-
Intercept CONT PHYAGG	0.72	0.10	**0.52; 0.93**	-
Threshold BIN PHYAGG	1.97	0.87	**0.28; 3.68**	7.17
Variance PN	0.45	0.05	**0.37; 0.56**	-
Residual variance OOP	0.85	0.09	**0.70; 1.04**	-
Residual variance BIN PHYAGG	3.12	0.54	**2.52; 4.35**	22.65
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.03**	-
Within-person Model				
OOP → BIN PHYAGG	-0.06	0.07	-0.20; 0.08	0.94
OOP → CONT PHYAGG	-0.01	0.01	-0.04; 0.02	-
Variance OOP	0.40	0.00	**0.37; 0.43**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	0.01	0.03	-0.04; 0.09	1.01
Indirect effect (path a* path bc)	0.00	0.00	-0.01; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; OOP =other-oriented perfectionism; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero. Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 19. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Physically Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Self-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SOP (path a)	0.39	0.07	**0.25; 0.53**	-
SOP → BIN PHYAGG (path bb)	-0.29	0.21	-0.70; 0.11	0.75
PN → BIN PHYAGG	0.75	0.24	**0.30; 1.22**	2.12
SOP → CONT PHYAGG (path bc)	-0.04	0.02	-0.09; 0.01	-
PN → CONT PHYAGG	0.09	0.03	**0.04; 0.14**	-
Intercept SOP	3.25	0.20	**2.86; 3.64**	-
Intercept CONT PHYAGG	0.81	0.10	**0.62; 1.01**	-
Threshold BIN PHYAGG	1.50	0.82	-0.10; 3.13	4.48
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SOP	0.44	0.05	**0.36; 0.55**	-
Residual variance BIN PHYAGG	3.15	0.55	**2.30; 4.43**	23.34
Residual variance CONT PHYAGG	0.02	0.00	**0.01; 0.02**	-
Within-person Model				
SOP → BIN PHYAGG	0.27	0.09	**0.09; 0.45**	1.31
SOP → CONT PHYAGG	0.00	0.02	-0.04; 0.04	-
Variance SOP	0.25	0.01	**0.23; 0.26**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	-0.11	0.08	-0.29; 0.04	0.90
Indirect effect (path a* path bc)	-0.02	0.01	-0.04; 0.00	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SOP =self-oriented perfectionism; PHYAGG = physically aggressive feelings; BIN = binary outcome variable; CONT = continuous outcome variable. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 20. Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Socially Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Other-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → OOP (path a)	-0.18	0.10	-0.38; 0.02
OOP → SOCAGG (path b)	-0.13	0.05	**-0.24; -0.03**
PN → SOCAGG	0.30	0.72	**0.16; 0.44**
Intercept OOP	4.92	0.28	**4.36; 5.47**
Intercept SOCAGG	1.87	0.33	**1.22; 2.50**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance OOP	0.87	0.10	**0.70; 1.08**
Residual variance SOCAGG	0.40	0.05	**0.33; 0.51**
Within-person Model			
OOP → SOCAGG	-0.01	0.02	-0.05; 0.03
Variance OOP	0.39	0.02	**0.36; 0.42**
Residual variance SOCAGG	0.26	0.01	**0.24; 0.28**
Indirect effect (path a*path b)	0.02	0.02	-0.00; 0.06

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; OOP =other-oriented perfectionism; SOCAGG = socially aggressive behaviors. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00).

Table 21. Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Socially Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Self-oriented Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → SOP (path a)	0.42	0.08	**0.27; 0.57**
SOP → SOCAGG (path b)	-0.14	0.07	-0.28; 0.01
PN → SOCAGG	0.37	0.08	**0.23; 0.53**
Intercept SOP	3.19	0.21	**2.78; 3.60**
Intercept SOCAGG	1.66	0.31	**1.05; 2.26**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance SOP	0.47	0.05	**0.38; 0.58**
Residual variance SOCAGG	0.41	0.05	**0.33; 0.52**
Within-person Model			
SOP→ SOCAGG	0.07	0.03	**0.02; 0.13**
Variance SOP	0.23	0.01	**0.21; 0.25**
Residual variance SOCAGG	0.26	0.01	**0.24; 0.28**
Indirect effect (path a*path b)	-0.05	0.03	-0.13; 0.00

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SOP =self-oriented perfectionism; SOCAGG = socially aggressive behaviors. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 22. Multilevel Structural Equation Mediation Model (2-1-1) Predicting Average Levels of Weekly Socially Aggressive Feelings from Pathological Narcissism and Average Levels of Weekly Socially Prescribed Perfectionism.

Parameter	Unstnd. Est.	Posterior S.D.	95% C.I.
Between-person Model			
PN → SPP (path a)	0.85	0.11	**0.63; 1.07**
SPP → SOCAGG (path b)	0.13	0.05	**0.03; 0.22**
PN → SOCAGG	0.22	0.08	**0.05; 0.38**
Intercept SPP	1.02	0.31	**0.42; 1.62**
Intercept SOCAGG	1.10	0.20	**0.70; 1.49**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance SPP	1.02	0.11	**0.83; 1.27**
Residual variance SOCAGG	0.41	0.05	**0.33; 0.51**
Within-person Model			
SPP → SOCAGG	0.00	0.02	-0.04; 0.04
Variance SPP	0.42	0.02	**0.39; 0.46**
Residual variance SOCAGG	0.26	0.01	**0.24; 0.28**
Indirect effect (path a*path b)	0.11	0.04	**0.02; 0.20**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; SPP =socially prescribed perfectionism; SOCAGG = socially aggressive behaviors. Values in bold are those for which the credibility interval did not include zero.

Table 23. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Promotion Focused Perfectionistic Self-presentation with Shame.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PROMO (path a)	1.05	0.14	**0.78; 1.32**	-
PROMO → BIN Shame (path bb)	0.18	0.09	**0.00; 0.36**	1.20
PN → BIN Shame$_i$	0.58	0.21	**0.19; 0.99**	1.79
PN → *PROMO.BINShame*$_r$	0.18	0.11	-0.04; 0.44	1.20
PROMO → CONT Shame (path bc)	0.01	0.02	-0.02; 0.04	-
PN → CONT Shame$_i$	0.05	0.04	-0.02; 0.12	-
PN → *PROMO.CONTShame*$_r$	0.03	0.03	-0.03; 0.08	-
Intercept PROMO	3.84	0.09	**3.67; 4.01**	-
Intercept CONT Shame$_i$	0.69	0.07	**0.56; 0.82**	-
Intercept *PROMO.BINShame*$_r$	0.20	0.07	**0.06; 0.33**	1.22
Intercept *PROMO.CONTShame*$_r$	0.06	0.02	**0.02; 0.09**	-
Threshold BIN Shame$_i$	0.48	0.37	**-0.23; 1.21**	1.62
Variance PNI	0.45	0.05	**0.37; 0.55**	-
Residual Variance PROMO	1.60	0.17	**1.31; 1.96**	-
Residual Variance BIN Shame$_i$	2.24	0.35	**1.57; 2.93**	9.39
Residual Variance CONT Shame$_i$	0.05	0.01	**0.03; 0.06**	-
Residual Variance *PROMO.BINShame*$_r$	0.13	0.08	**0.03; 0.34**	1.14
Residual Variance *PROMO.CONTShame*$_r$	0.01	0.00	**0.00; 0.02**	-
Within-person Model				
Time → BIN Shame	-0.13	0.02	**-0.17; -0.09**	0.88
Time → CONT Shame	-0.01	0.00	-0.02; 0.00	-
Variance PROMO	0.58	0.02	**0.54; 0.62**	-
Residual variance CONT Shame	0.06	0.00	**0.05; 0.06**	-
Indirect effect (path a*path bb)	0.18	0.10	**0.00; 0.39**	1.20
Indirect effect (path a* path bc)	0.01	0.02	-0.02; 0.04	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *PROMO.BINShame*$_r$ = random slope of within-person binary (BIN) shame regressed on within-person promotion-focused perfectionistic self-presentation; *PROMO.CONTShame*$_r$ = random slope of within-person continuous (CONT) shame regressed on within-person promotion-focused perfectionistic self-presentation; Shame$_i$ = random intercept for shame at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 24. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Prevention Focused Perfectionistic Self-presentation with Shame.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PREV (path a)	0.77	0.11	**0.55; 0.99**	-
PREV → BIN Shame (path bb)	0.46	0.11	**0.26; 0.67**	1.58
PN → BIN Shame$_i$	0.39	0.19	0.01; 0.77	1.48
PN → *PREV.BINShame*$_r$	0.19	0.16	-0.12; 0.51	1.21
PREV → CONT Shame (path bc)	0.03	0.02	-0.01; 0.07	-
PN → CONT Shame$_i$	0.04	0.04	-0.03; 0.11	-
PN → *PREV.CONTShame*$_r$	0.01	0.03	-0.06; 0.08	-
Intercept PREV	3.94	0.07	**3.79; 4.08**	-
Intercept CONT Shame$_i$	0.58	0.08	**0.42; 0.75**	-
Intercept *PREV.BINShame*$_r$	0.35	0.10	**0.17; 0.55**	1.42
Intercept *PREV.CONTShame*$_r$	0.06	0.02	**0.02; 0.10**	-
Threshold BIN Shame$_i$	1.68	0.43	**0.85; 2.55**	5.37
Variance PN	0.44	0.05	**0.37; 0.55**	-
Residual variance PREV	1.11	0.11	**0.91; 1.35**	-
Residual Variance BIN Shame$_i$	1.97	0.33	**1.44; 2.71**	7.17
Residual Variance CONT Shame$_i$	0.05	0.01	**0.03; 0.06**	-
Residual Variance *PREV.BINShame*$_r$	0.29	0.18	**0.05; 0.73**	1.34
Residual Variance *PREV.CONTShame*$_r$	0.01	0.01	**0.00; 0.02**	-
Within-person Model				
Time → BIN Shame	-0.11	0.02	**-0.15; -0.08**	0.90
Time → CONT Shame	-0.00	0.00	-0.01; 0.01	-
Variance PREV	0.33	0.01	**0.31; 0.36**	-
Residual variance CONT Shame	0.06	0.00	**0.05; 0.07**	-
Indirect effect (path a*path bb)	0.35	0.10	**0.18; 0.56**	1.42
Indirect effect (path a* path bc)	0.03	0.02	-0.00; 0.06	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *PREV.BINShame*$_r$ = random slope of within-person binary (BIN) shame regressed on within-person prevention-focused perfectionistic self-presentation; *PREV.CONTShame*$_r$ = random slope of within-person continuous (CONT) shame regressed on within-person prevention-focused perfectionistic self-presentation; Shame$_i$ = random intercept for shame at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 25. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Promotion Focused Perfectionistic Self-presentation with Physically Aggressive Feelings.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → PROMO (path a)	1.04	0.14	**0.77; 1.31**	-
PROMO → BIN PHYAGG (path bb)	-0.01	0.12	-0.24; 0.23	0.99
PN → BIN PHYAGG$_i$	0.70	0.27	**0.17; 1.25**	2.01
PN → *PROMO.BINPA*$_r$	0.13	0.14	-0.14; 0.42	1.14
PROMO → CONT PHYAGG (path bc)	-0.02	0.01	-0.04; 0.01	-
PNI → CONT PHYAGG$_i$	0.09	0.03	**0.03; 0.14**	-
PN → *PROMO.CONTPA*$_r$	-0.04	0.03	-0.09; 0.02	-
Intercept PROMO	3.85	0.09	**3.68; 4.02**	-
Intercept CONT PHYAGG$_i$	0.93	0.05	**0.83; 1.03**	-
Intercept *PROMO.BINPA*$_r$	0.06	0.09	-0.11; 0.22	1.06
Intercept *PROMO.CONTPA*$_r$	0.01	0.02	-0.02; 0.03	-
Threshold BIN PHYAGG$_i$	0.55	0.48	-0.39; 1.51	1.73
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PROMO	1.60	0.17	**1.32; 1.97**	-
Residual Variance BIN PHYAGG$_i$	3.79	0.69	**2.70; 5.40**	44.26
Residual Variance CONT PHYAGG$_i$	0.02	0.00	**0.01; 0.02**	-
Residual Variance *PROMO.BINPA*$_r$	0.32	0.14	**0.11; 0.66**	1.38
Residual Variance *PROMO.CONTPA*$_r$	0.01	0.00	**0.00; 0.01**	-
Within-person Model				
Time → BIN PHYAGG	-0.07	0.02	**-0.12; -0.03**	0.93
Time → CONT PHYAGG	0.01	0.00	-0.00; 0.01	-
Variance PROMO	0.58	0.02	**0.54; 0.62**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	-0.01	0.13	-0.26; 0.24	0.99
Indirect effect (path a* path bc)	-0.02	0.01	-0.05; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *PROMO.BINSPA*$_r$ = random slope of within-person binary (BIN) physically aggressive feelings regressed on within-person promotion-focused perfectionistic self-presentation; *PROMO.CONTPA*$_r$ = random slope of within-person continuous (CONT) physically aggressive feelings regressed on within-person promotion focused perfectionistic self-presentation; PHYAGG$_i$ = random intercept for physically aggressive feelings outcome variable at the between person level. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 26. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Prevention Focused Perfectionistic Self-presentation with Physically Aggressive Feelings.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PNI → PREV (path a)	0.76	0.11	**0.54; 0.99**	-
PREV → BIN PHYAGG (path bb)	0.04	0.14	-0.23; 0.30	1.04
PN → BIN PHYAGG$_i$	0.64	0.26	**0.15; 1.16**	1.90
PN→ *PREV.BINPA*$_r$	0.16	0.17	-0.17; 0.49	1.17
PREV → CONT PHYAGG (path bc)	-0.00	0.01	-0.03; 0.03	-
PN → CONT PHYAGG$_i$	0.07	0.03	**0.01; 0.12**	-
PN → *PREV.CONTPA*$_r$	0.01	0.03	-0.06; 0.07	-
Intercept PREV	3.94	0.07	**3.80; 4.08**	-
Intercept CONT PHYAGG$_i$	0.87	0.06	**0.75; 0.98**	-
Intercept *PREV.BINPA*$_r$	0.21	0.10	**0.01; 0.41**	2.39
Intercept *PREV.CONTPA*$_r$	0.04	0.02	**0.01; 0.08**	-
Threshold BIN PHYAGG$_i$	0.76	0.56	-0.33; 1.86	2.14
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance PREV	1.11	0.11	**0.91; 1.36**	-
Residual Variance BIN PHYAGG$_i$	3.60	0.65	**2.57; 5.11**	36.60
Residual Variance CONT PHYAGG$_i$	0.02	0.00	**0.01; 0.03**	-
Residual Variance *PREV.BINPA*$_r$	0.31	0.20	**0.05; 0.78**	1.36
Residual Variance *PREV.CONTPA*$_r$	0.01	0.00	**0.00; 0.02**	-
Within-person Model				
Time → BIN PHYAGG	-0.06	0.02	**-0.10; -0.02**	0.94
Time → CONT PHYAGG	0.01	0.00	-0.00; 0.01	-
Variance PREV	0.33	0.01	**0.31; 0.36**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.03; 0.04**	-
Indirect effect (path a*path bb)	0.03	0.11	-0.18; 0.24	1.03
Indirect effect (path a* path bc)	-0.00	0.01	-0.02; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *PREV.BINSPA*$_r$ = random slope of within-person binary (BIN) physically aggressive feelings regressed on within-person prevention-focused perfectionistic self-presentation; *PREV.CONTPA*$_r$ = random slope of within-person continuous (CONT) physically aggressive feelings regressed on within-person prevention-focused perfectionistic self-presentation; PHYAGG$_i$ = random intercept for physically aggressive feelings outcome variable at the between person level. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physically aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 27. Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Promotion Focused Perfectionistic Self-presentation with Social Aggression.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.
Between-person Model			
PN → PROMO (path a)	0.10	0.03	**0.03; 0.17**
PROMO → SOCAGG (path b)	0.01	0.04	-0.06; 0.09
PN→ $SOCAGG_i$	0.31	0.08	**0.14; 0.47**
PN→ $PROMO.SA_r$	0.10	0.03	**0.03; 0.17**
Intercept PROMO	3.85	0.10	**3.65; 4.06**
Intercept $SOCAGG_i$	2.13	0.16	**1.86; 2.44**
Intercept $PROMO.SA_r$	0.05	0.02	**0.00; 0.09**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance PROMO	2.00	0.22	**1.63; 2.48**
Residual Variance $SOCAGG_i$	0.42	0.05	**0.34; 0.53**
Residual Variance $PROMO.SA_r$	0.02	0.01	**0.01; 0.04**
Within-person Model			
Time → SOCAGG	-0.03	0.01	**-0.04; -0.02**
Variance PROMO	0.57	0.02	**0.53; 0.61**
Residual variance SOCAGG	0.24	0.01	**0.22; 0.26**
Indirect effect (path a*path b)	0.00	0.00	-0.01; 0.01

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; $SOCAGG_i$ = random intercept for social aggression at the between-peerson level; *PROMO.SAr* = random slope of within-person social aggression regressed on within-person promotion-focused perfectionistic self-presentation. Subscript *i* denotes between-person variability of variable and subscript *it* denotes within-person variability of variable. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 28. Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Prevention Focused Perfectionistic Self-presentation with Social Aggression.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.
Between-person Model			
PN → PREV (path a)	0.18	0.04	**0.10; 0.27**
PREV → SOCAGG (path b)	0.10	0.05	**0.01; 0.19**
PN → $SOCAGG_i$	0.25	0.08	**0.09; 0.41**
PN → $PREV.SA_r$	0.18	0.04	**0.10; 0.27**
Intercept PREV	3.94	0.08	**3.78; 4.11**
Intercept $SOCAGG_i$	1.80	0.19	**1.42; 2.17**
Intercept $PREV.SA_r$	0.07	0.03	**0.02; 0.13**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance PREV	1.30	0.14	**1.06; 1.61**
Residual Variance $SOCAGG_i$	0.41	0.05	**0.33; 0.52**
Residual Variance $PREV.SA_r$	0.02	0.01	**0.00; 0.06**
Within-person Model			
Time → SOCAGG	-0.03	0.01	**-0.04; -0.02**
Variance PREV	0.32	0.01	**0.30; 0.35**
Residual variance SOCAGG	0.24	0.01	**0.22; 0.26**
Indirect effect (path a*path b)	0.02	0.01	**0.00; 0.04**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; $SOCAGG_i$ = random intercept for social aggression at the between-person level; *PREV.SAr* = random slope of within-person social aggression regressed on within-person prevention-focused perfectionistic self-presentation. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 29. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Self-oriented Perfectionism with Shame.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SOP (path a)	0.39	0.07	**0.25; 0.54**	-
SOP → BIN Shame (path bb)	0.05	0.16	-0.27; 0.37	1.05
PN → BIN Shame$_i$	0.74	0.19	**0.37; 1.12**	2.10
PN→ *SOP.BINShame*$_r$	0.26	0.16	-0.06; 0.57	1.30
SOP → CONT Shame (path bc)	-0.01	0.03	-0.07; 0.05	-
PN→ CONT Shame$_i$	0.07	0.04	-0.01; 0.14	-
PN → *SOP.CONTShame*$_r$	0.01	0.04	-0.08; 0.09	-
Intercept SOP	4.27	0.05	**4.18; 4.36**	-
Intercept CONT Shame$_i$	0.77	0.14	**050; 1.04**	-
Intercept *SOP.BINShame*$_r$	0.07	0.09	-0.11; 0.25	1.07
Intercept *SOP.CONTShame*$_r$	0.04	0.03	-0.01; 0.09	-
Threshold BIN Shame$_i$	0.07	0.70	-1.31; 1.45	1.07
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SOP	0.44	0.05	**0.36; 0.54**	-
Residual Variance BIN Shame$_i$	2.03	0.33	**1.50; 2.79**	
Residual Variance CONT Shame$_i$	0.04	0.01	**0.03; 0.06**	-
Residual Variance *SOP.BINShame*$_r$	0.09	0.10	**0.00; 0.39**	1.09
Residual Variance *SOP.CONTShame*$_r$	0.01	0.01	**0.00; 0.03**	-
Within-person Model				
Time → BIN Shame	-0.12	0.02	**-0.15; -0.08**	0.89
Time → CONT Shame	-0.00	0.00	-0.01; 0.01	-
Variance SOP	0.25	0.01	**0.23; 0.26**	-
Residual variance CONT Shame	0.06	0.00	**0.05; 0.07**	-
Indirect effect (path a*path bb)	0.02	0.07	-0.11; 0.15	1.02
Indirect effect (path a* path bc)	-0.01	0.01	-0.03; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *SOP.BINShame*$_r$ = random slope of within-person binary (BIN) shame regressed on within-person self-oriented perfectionism; *SOP.CONTShame*$_r$ = random slope of within-person continuous (CONT) shame regressed on within-person self-oriented perfectionism; Shame$_i$ = random intercept for shame at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 30. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Other-oriented Perfectionism with Shame.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → OOP (path a)	-0.18	0.10	-0.38; 0.02	-
OOP → BIN Shame (path bb)	-0.14	0.12	-0.37; 0.10	0.87
PN → BIN Shame$_i$	0.76	0.18	**0.42; 1.11**	2.14
PN → *OOP.BINShame*$_r$	0.02	0.13	-0.24; 0.26	1.02
OOP → CONT Shame (path bc)	-0.01	0.02	-0.05; 0.04	-
PN → CONT Shame$_i$	0.07	0.03	**0.01; 0.13**	-
PN → *OOP.CONTShame*$_r$	0.01	0.03	-0.05; 0.07	-
Intercept OOP	4.47	0.06	**4.35; 4.60**	-
Intercept CONT Shame$_i$	0.75	0.11	**0.54; 0.95**	-
Intercept *OOP.BINShame*$_r$	-0.17	0.08	**-0.33; -0.03**	0.84
Intercept *OOP.CONTShame*$_r$	-0.01	0.02	-0.04; 0.03	-
Threshold BIN Shame$_i$	-0.78	0.55	-1.85; 0.29	0.46
Variance PN	0.45	0.05	**0.37; 0.56**	-
Residual variance OOP	0.85	0.09	**0.70; 1.04**	-
Residual Variance BIN Shame$_i$	2.06	0.34	**1.52; 2.83**	9.58
Residual Variance CONT Shame$_i$	0.04	0.01	**0.03; 0.06**	-
Residual Variance *OOP.BINShame*$_r$	0.13	0.10	**0.01; 0.39**	1.14
Residual Variance *OOP.CONTShame*$_r$	0.01	0.00	**0.00; 0.02**	-
Within-person Model				
Time → BIN Shame	-0.12	0.02	**-0.16; -0.09**	0.89
Time → CONT Shame	-0.00	0.00	-0.01; 0.01	-
Variance OOP	0.40	0.01	**0.37; 0.43**	-
Residual variance CONT Shame	0.06	0.00	**0.06; 0.07**	-
Indirect effect (path a*path bb)	0.02	0.03	-0.02; 0.09	1.02
Indirect effect (path a* path bc)	0.00	0.01	-0.01; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *OOP.BINShame*$_r$ = random slope of within-person binary (BIN) shame regressed on within-person other-oriented perfectionism; *OOP.CONTShame*$_r$ = random slope of within-person continuous (CONT) shame regressed on within-person other-oriented perfectionism; Shame$_i$ = random intercept for shame at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 31. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Socially Prescribed Perfectionism with Shame.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SPP (path a)	0.83	0.11	**0.62; 1.04**	-
SPP → BIN Shame (path bb)	0.61	0.11	**0.40; 0.84**	1.84
PN → BIN Shame$_i$	0.28	0.20	-0.11; 0.66	1.32
PN → *SPP.BINShame*$_r$	0.18	0.14	-0.09; 0.45	1.20
SPP → CONT Shame (path bc)	0.07	0.02	**0.03; 0.11**	-
PN → CONT Shame$_i$	0.02	0.03	-0.05; 0.08	-
PN → *SPP.CONTShame*$_r$	0.03	0.03	-0.03; 0.09	-
Intercept SPP	3.29	0.07	**3.15; 3.42**	-
Intercept CONT Shame$_i$	0.48	0.07	**0.34; 0.63**	-
Intercept *SPP.BINShame*$_r$	0.37	0.08	**0.22; 0.53**	1.45
Intercept *SPP.CONTShame*$_r$	0.06	0.02	**0.03; 0.10**	-
Threshold BIN Shame$_i$	1.78	0.39	**1.03; 2.56**	5.93
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SPP	0.99	0.10	**0.81; 1.21**	-
Residual Variance BIN Shame$_i$	1.86	0.31	**1.36; 2.58**	6.42
Residual Variance CONT Shame$_i$	0.04	0.01	**0.03; 0.06**	-
Residual Variance *SPP.BINShame*$_r$	0.21	0.13	**0.03; 0.52**	1.23
Residual Variance *SPP.CONTShame*$_r$	0.01	0.01	**0.01; 0.03**	-
Within-person Model				
Time → BIN Shame	-0.14	0.02	**-0.18; -0.10**	0.87
Time → CONT Shame	-0.01	0.00	-0.02; 0.00	-
Variance SPP	0.45	0.02	**0.42; 0.48**	-
Residual variance CONT Shame	0.05	0.00	**0.05; 0.06**	-
Indirect effect (path a*path bb)	0.50	0.12	**0.30; 0.75**	1.65
Indirect effect (path a* path bc)	0.06	0.02	**0.03; 0.10**	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *SPP.BINShame*$_r$ = random slope of within-person binary (BIN) shame regressed on within-person socially prescribed perfectionism; *SPP.CONTShame*$_r$ = random slope of within-person continuous (CONT) shame regressed on within-person socially prescribed perfectionism; Shame$_i$ = random intercept for shame at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling ashamed) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 32. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Self-oriented Perfectionism with Physically Aggressive Feelings.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SOP (path a)	0.39	0.07	**0.24; 0.53**	-
SOP → BIN PHYAGG (path bb)	-0.23	0.20	-0.63; 0.16	0.79
PN → BIN PHYAGG$_i$	0.78	0.24	**0.32; 1.26**	2.18
PN → *SOP.BINPA*$_r$	-0.13	0.17	-0.48; 0.20	0.88
SOP → CONT PHYAGG (path bc)	-0.04	0.02	-0.08; 0.01	-
PN → CONT PHYAGG$_i$	0.09	0.03	**0.03; 0.14**	-
PN → *SOP.CONTPA*$_r$	0.01	0.05	-0.08; 0.10	-
Intercept SOP	4.28	0.05	**4.19; 4.37**	-
Intercept CONT PHYAGG$_i$	1.03	0.10	**0.83; 1.22**	-
Intercept *SOP.BINPA*$_r$	0.28	0.10	**0.09; 0.47**	1.32
Intercept *SOP.CONTPA*$_r$	-0.01	0.03	-0.06; 0.04	-
Threshold BIN PHYAGG$_i$	-0.41	0.86	-2.11; 1.28	0.66
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SOP	0.45	0.05	**0.37; 0.55**	-
Residual Variance BIN PHYAGG$_i$	3.30	0.58	**2.39; 4.65**	27.11
Residual Variance CONT PHYAGG$_i$	0.02	0.00	**0.01; 0.02**	-
Residual Variance *SOP.BINPA*$_r$	0.06	0.09	**0.00; 0.32**	1.06
Residual Variance *SOP.CONTPA*$_r$	0.02	0.01	**0.01; 0.04**	-
Within-person Model				
Time → BIN PHYAGG	-0.06	0.02	**-0.09; -0.02**	0.94
Time → CONT PHYAGG	0.01	0.00	-0.00; 0.01	-
Variance SOP	0.25	0.01	**0.23; 0.26**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.03; 0.05**	-
Indirect effect (path a*path bb)	-0.09	0.08	-0.26; 0.06	0.91
Indirect effect (path a* path bc)	-0.01	0.01	-0.04; 0.00	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *SOP.BINPA*$_r$ = random slope of within-person binary (BIN) physically aggressive feelings regressed on within-person self-oriented perfectionism; *SOP.CONTPA*$_r$ = random slope of within-person continuous (CONT) physically aggressive feelings regressed on within-person self-oriented perfectionism; PHYAGG$_i$ = random intercept for physically aggressive feelings outcome variable. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physical aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 33. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Socially Prescribed Perfectionism with Physically Aggressive Feelings.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → SPP (path a)	0.83	0.11	**0.61; 1.04**	-
SPP → BIN PHYAGG (path bb)	0.38	0.14	**0.10; 0.66**	1.46
PN → BIN PHYAGG$_i$	0.40	0.26	-0.10; 0.91	1.49
PN → *SPP.BINPA*$_r$	-0.00	0.15	-0.29; 0.29	1.00
SPP → CONT PHYAGG (path bc)	-0.01	0.02	-0.04; 0.02	-
PN → CONT PHYAGG$_i$	0.08	0.03	**0.02; 0.13**	-
PN → *SPP.CONTPA*$_r$	0.03	0.03	-0.02; 0.08	-
Intercept SPP	3.29	0.70	**3.16; 3.43**	-
Intercept CONT PHYAGG$_i$	0.90	0.06	**0.79; 1.01**	-
Intercept *SPP.BINPA*$_r$	0.07	0.09	-0.11; 0.24	1.07
Intercept *SPP.CONTPA*$_r$	0.02	0.02	-0.01; 0.05	-
Threshold BIN PHYAGG$_i$	1.82	0.51	**0.85; 2.83**	6.17
Variance PN	0.45	0.05	**0.37; 0.55**	-
Residual variance SPP	0.99	0.10	**0.82; 1.22**	-
Residual Variance BIN PHYAGG$_i$	3.34	0.60	**2.41; 4.73**	28.22
Residual Variance CONT PHYAGG$_i$	0.02	0.00	**0.01; 0.02**	-
Residual Variance *SPP.BINPA*$_r$	0.27	0.14	**0.07; 0.60**	1.31
Residual Variance *SPP.CONTPA*$_r$	0.01	0.00	**0.00; 0.01**	-
Within-person Model				
Time → BIN PHYAGG	-0.06	0.02	**-0.10; -0.02**	0.94
Time → CONT PHYAGG	0.00	0.00	-0.00; 0.01	-
Variance SPP	0.45	0.02	**0.42; 0.48**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.04; 0.05**	-
Indirect effect (path a*path bb)	0.31	0.13	**0.08; 0.57**	1.36
Indirect effect (path a* path bc)	-0.01	0.01	-0.04; 0.02	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *SPP.BINPA*$_r$ = random slope of within-person binary (BIN) physically aggressive feelings regressed on within-person socially prescribed perfectionism; *SPP.CONTPA*$_r$ = random slope of within-person continuous (CONT) physically aggressive feelings regressed on within-person socially prescribed perfectionism; PHYAGG$_i$ = random intercept for physically aggressive feelings outcome variable. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physical aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 34. Two Part Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Other-oriented Perfectionism with Physically Aggressive Feelings.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.	Odds Ratio
Between-person Model				
PN → OOP (path a)	-0.18	0.10	-0.37; 0.02	-
OOP → BIN PHYAGG (path bb)	-0.05	0.16	-0.36; 0.25	0.95
PN → BIN PHYAGG$_i$	0.72	0.23	**0.27; 1.19**	2.05
PN → *OOP.BINPA*$_r$	-0.17	0.16	-0.48; 0.16	0.84
OOP → CONT PHYAGG (path bc)	-0.01	0.02	-0.04; 0.02	-
PN → CONT PHYAGG$_i$	0.07	0.03	**0.02; 0.12**	-
PN → *OOP.CONTPA*$_r$	0.03	0.03	-0.04; 0.09	-
Intercept OOP	4.47	0.06	**4.35; 4.60**	-
Intercept CONT PHYAGG$_i$	0.90	0.08	**0.74; 1.04**	-
Intercept *OOP.BINPA*$_r$	-0.08	0.10	-0.27; 0.11	0.92
Intercept *OOP.CONTPA*$_r$	-0.02	0.02	-0.05; 0.02	-
Threshold BIN PHYAGG$_i$	0.39	0.70	-1.00; 1.77	1.48
Variance PN	0.45	0.05	**0.37; 0.56**	-
Residual variance OOP	0.85	0.09	**0.70; 1.04**	-
Residual Variance BIN PHYAGG$_i$	3.58	0.66	**2.56; 5.12**	35.87
Residual Variance CONT PHYAGG$_i$	0.02	0.00	**0.01; 0.03**	-
Residual Variance *OOP.BINPA*$_r$	0.32	0.19	**0.07; 0.80**	1.38
Residual Variance *OOP.CONTPA*$_r$	0.01	0.01	**0.00; 0.03**	-
Within-person Model				
Time → BIN PHYAGG	-0.06	0.02	**-0.10; -0.02**	0.94
Time → CONT PHYAGG	0.01	0.00	-0.00; 0.01	-
Variance OOP	0.40	0.01	**0.37; 0.43**	-
Residual variance CONT PHYAGG	0.04	0.00	**0.03; 0.04**	-
Indirect effect (path a*path bb)	0.01	0.03	-0.05; 0.08	1.01
Indirect effect (path a* path bc)	-0.00	0.00	-0.01; 0.01	-

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; *OOP.BINPA*$_r$ = random slope of within-person binary (BIN) physically aggressive feelings regressed on within-person other-oriented perfectionism; *OOP.CONTPA*$_r$ = random slope of within-person continuous (CONT) physically aggressive feelings regressed on within-person other-oriented perfectionism; PHYAGG$_i$ = random intercept for physically aggressive feelings at the between-person level. Values in bold are those for which the credibility interval did not include zero (values below -0.005 were rounded down to -0.00 and below 0.005 were rounded down to 0.00). Exponentiated estimates were calculated for the binary outcome (presence vs. absence of feeling physical aggressive) and interpreted as odds ratio because Mplus treats it as a categorical outcome.

Table 35. Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Self-oriented Perfectionism with Social Aggression.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.
Between-person Model			
PN → SOP (path a)	0.22	0.05	**0.13; 0.31**
SOP → SOCAGG (path b)	-0.14	0.07	-0.28; 0.01
PN → $SOCAGG_i$	0.38	0.08	**0.22; 0.53**
PN → $SOP.SA_r$	0.22	0.05	**0.13; 0.31**
Intercept SOP	4.29	0.05	**4.19; 4.39**
Intercept $SOCAGG_i$	2.76	0.32	**2.13; 3.38**
Intercept $SOP.SA_r$	0.08	0.04	**0.01; 0.15**
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance SOP	0.48	0.05	**0.39; 0.60**
Residual Variance $SOCAGG_i$	0.42	0.05	**0.34; 0.52**
Residual Variance $SOP.SA_r$	0.05	0.02	**0.01; 0.10**
Within-person Model			
Time → SOCAGG	-0.03	0.01	**-0.04; -0.02**
Variance SOP	0.23	0.01	**0.21; 0.25**
Residual variance SOCAGG	0.24	0.01	**0.22; 0.26**
Indirect effect (path a*path b)	-0.03	0.02	-0.07; 0.00

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; $SOCAGG_i$ = random intercept for social aggression at between-person level; *SOP.SAr* = random slope of within-person social aggression regressed on within-person self-oriented perfectionism. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 36. Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Socially Prescribed Perfectionism with Social Aggression.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.
Between-person Model			
PN → SPP (path a)	0.11	0.04	**0.03; 0.20**
SPP → SOCAGG (path b)	0.12	0.05	**0.03; 0.22**
PN → $SOCAGG_i$	0.22	0.08	**0.06; 0.39**
PN → $SPP.SA_r$	0.11	0.04	**0.03; 0.20**
Intercept SPP	3.28	0.08	**3.13; 3.45**
Intercept $SOCAGG_i$	1.78	0.17	**1.45; 2.11**
Intercept $SPP.SA_r$	0.02	0.03	-0.03; 0.08
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance SPP	1.27	0.14	**1.02; 1.58**
Residual Variance $SOCAGG_i$	0.41	0.05	**0.33; 0.51**
Residual Variance $SPP.SA_r$	0.04	0.02	**0.02; 0.08**
Within-person Model			
Time → SOCAGG	-0.03	0.01	**-0.04; -0.02**
Variance SPP	0.42	0.02	**0.39; 0.46**
Residual variance SOCAGG	0.24	0.01	**0.22; 0.26**
Indirect effect (path a*path b)	0.01	0.01	**0.00; 0.03**

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; $SOCAGG_i$ = random intercept for social aggression; *SPP.SAr* = random slope of within-person social aggression regressed on within-person socially prescribed perfectionism. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

Table 37. Multilevel Structural Equation Mediation Model (2-1-1) Includes Estimates of the Cross-level Moderation by Pathological Narcissism of the Weekly Within-person Association of Other-oriented Perfectionism with Social Aggression.

Parameter	Unstnd. (SE)	Posterior S.D.	95% C.I.
Between-person Model			
PN → OOP (path a)	0.04	0.04	-0.04; 0.11
OOP → SOCAGG (path b)	-0.13	0.05	**-0.24; -0.30**
PN → $SOCAGG_i$	0.30	0.07	**0.16; 0.44**
PN → $OOP.SA_r$	0.04	0.04	-0.04; 0.11
Intercept OOP	4.44	0.07	**4.31; 4.58**
Intercept $SOCAGG_i$	2.77	0.24	**2.30; 3.24**
Intercept $OOP.SA_r$	-0.01	0.03	-0.06; 0.04
Variance PN	0.45	0.05	**0.37; 0.55**
Residual variance OOP	0.89	0.10	**0.72; 1.10**
Residual Variance $SOCAGG_i$	0.40	0.05	**0.33; 0.51**
Residual Variance $OOP.SA_r$	0.02	0.01	**0.00; 0.04**
Within-person Model			
Time → SOCAGG	-0.03	0.01	**-0.04; -0.02**
Variance OOP	0.39	0.02	**0.36; 0.42**
Residual variance SOCAGG	0.25	0.01	**0.23; 0.27**
Indirect effect (path a*path b)	-0.00	0.01	-0.02; 0.01

Note. Unstnd. Est. = Unstandardized estimates; S.D. = standard deviation; 95% C.I. = Confidence Interval; PN = pathological narcissism; $SOCAGG_i$ = random intercept for social aggression at the between-person level; *OOP.SAr* = random slope of within-person social aggression regressed on within-person other-oriented perfectionism. Values in bold are those for which the credibility interval did not include zero (values below 0.005 were rounded down to 0.00).

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SELECTED PUBLICATIONS

Peer Reviewed Journal Articles

1. **Dawood, S**., Hallquist, M.N., Pincus, A.L., Ram, N., Michelle, G.N., Wilson, S.J., & Levy, K.N. (2020). Comparing signal-contingent and event-contingent experience sampling ratings of affect in a sample of psychotherapy outpatients. *Journal of Psychopathology and Behavioral Assessment, 42*, 13-24.
2. **Dawood, S.**, & Pincus, A.L. (2018). Pathological narcissism and the severity, variability, and instability of depressive symptoms. *Personality Disorders: Theory, Research, and Treatment, 9*, 144-154.
3. **Dawood, S.**, Schroder, H.S., Donnellan, M.B., & Pincus, A.L. (2018). Pathological narcissism and nonsuicidal self-injury. *Journal of Personality Disorders, 32*, 87-108.
4. **Dawood, S.**, & Pincus, A.L. (2016). Multisurface interpersonal assessment in a cognitive-behavioral therapy context. *Journal of Personality Assessment, 98*(5), 449-460.
5. **Dawood, S.**, Thomas, K.M., Wright, A.G.C., & Hopwood, C.J. (2013). Heterogeneity of interpersonal problems among depressed young adults: Associations with substance abuse and pathological personality traits. *Journal of Personality Assessment, 95*(5), 513-522.

Book Chapters

1. Pincus, A. L., Hopwood, C. H., & **Dawood, S.** (2020). A contemporary interpersonal reassessment of Madeline G. In C.H. Hopwood & M. Waugh. (Eds.), *Personality Assessment Paradigms and Methods: A Collaborative Assessment of Madeline G* (pp. 112-131). New York: Routledge.
2. **Dawood, S.,** Wu, L.Z., Bliton, C., & Pincus, A.L. (2020). Narcissistic and histrionic personality disorders. In C. Lejuez & K.L. Gratz. (Eds.), *The Handbook on Personality Disorders* (pp. 277-291). United Kingdom: Cambridge University Press.
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5. Dowgwillo, E.A., **Dawood, S**., & Pincus, A.L. (2016). The dark side of narcissism. In V. Ziegler-Hill & D. K. Marcus. (Eds.), *The Dark Side of Personality: Science and Practice in Social, Personality, and Clinical Psychology* (pp. 25-44). Washington, DC: American Psychological Association.