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Shame Aversion and Shame-Proneness in Cluster C Personality Disorders

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The associations between shame and Cluster C personality disorders (PDs) were examined in 237 undergraduates, 35 of whom met at least subthreshold criteria for Cluster C PDs assessed using the Personality Disorder Interview–IV. Shame-proneness (the propensity to experience shame across many situations) was measured using the Test of Self-Conscious Affect–3, and shame aversion (the tendency to perceive shame as especially painful and undesirable) was measured using the Shame-Aversive Reactions Questionnaire. A go/no-go association task was used to assess the strength of implicit mental representations of the association between shame and pain, relative to that between shame and pleasure. Shame-proneness and shame aversion were associated with Cluster C PD symptoms over and above trait positive and negative affect. Further, shame-proneness was found to be associated with Cluster C PDs among individuals with high but not low levels of shame aversion. Finally, shame–pain associations were uniquely associated with dependent personality disorder.

Keywords: shame, Cluster C personality disorders, avoidant personality disorder, dependent personality disorder, obsessive-compulsive personality disorder

Shame is often defined as an unpleasant emotion that arises when an individual perceives some defect in his or her self (e.g., Lewis, 1971; Tangney, Miller, Flicker, & Barlow, 1996). This negative evaluation of the self then leads to a desire to hide, withdraw, or escape (Lewis, 1971; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Shame is not strictly a publicly experienced emotion; rather, shame may occur whenever flaws are apparent to the individual, regardless of the presence of others as evaluators (Tangney, Miller, et al., 1996; Tracy & Robins, 2006). Furthermore, shame can be elicited in a variety of situations (see Tangney, Miller, et al., 1996). It is even sometimes experienced because of flaws that individuals perceive in those with whom they are close. For example, individuals with a cultural background emphasizing interdependence among the self and others experience more vicarious shame than those with a cultural background emphasizing independence (e.g., Fischer & Tangney, 1995; Stipek, 1998). Shame can be contrasted with guilt, which is another self-conscious emotion (Tracy, Robins, & Tangney, 2007) that arises when individuals negatively evaluate their behavior and subsequently desire to make amends (e.g., Lewis, 1971). Partially on the basis of these differing behavioral responses, shame is generally considered to be the more maladaptive emotion (Tangney, Wagner, et al., 1996).

Shame has been the focus of several studies suggesting that some people experience shame more readily than others. Tangney and colleagues (e.g., Tangney, Wagner, et al., 1996) have investigated the propensity to experience shame across many different situations, referred to as shame-proneness (e.g., Lewis, 1971). Constructs such as shame-proneness may be helpful in beginning to understand the mechanisms by which shame may influence psychological functioning. For example, shame-proneness has been found to be associated with a variety of psychological problems, including but not limited to depression, anxiety, eating disorders, posttraumatic stress disorder, aggression, hostility, and fears of intimacy (e.g., Lutwak, Panish, & Ferrari, 2003; Tangney & Dearing, 2002; Thompson & Berenbaum, 2006).

We propose that shame-proneness is not the only shame-related construct necessary for understanding how shame influences psychological functioning. For example, the strategies used by those with Cluster C personality disorders (PDs; i.e., avoidant, dependent, and obsessive-compulsive PDs) may actually serve as methods for avoiding experiences of shame before they ever begin. Therefore, we suggest that shame aversion—a tendency to perceive shame as particularly painful and undesirable—may also be relevant to psychological functioning. Such a perception may lead an individual to attempt to avoid any potential future experiences of shame. The behavioral responses associated with shame—hiding, withdrawal, and escape—may therefore even occur preemptively, in anticipation of the emotional experience.

Moreover, in some instances, these behaviors may be enacted even when individuals do not explicitly recognize that shame's painfulness is influencing their choices. Although people may have considerable insight into their motives for behaving in particular ways, some researchers have suggested that people may also be acting in accord with relatively automatic motivations of which they are less aware (e.g., Greenwald & Banaji, 1995; McClelland, Koestner, & Weinberger, 1989). To address this issue, we used both implicit and explicit measures, as these types of measures may tap into different motives (McClelland et al., 1989) or mental processes (Gawronski & Bodenhausen, 2006). In particular, we

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assessed the implicit mental representations of the association between shame and pain, as we expected that higher levels of this association may relate to increases in symptom levels of all three Cluster C PDs.

It is also possible that particular combinations of shame-proneness and shame aversion may influence behavior and psychological functioning. For example, experiencing shame easily in various situations may only be problematic for individuals who are substantially distressed by that emotional experience. In other words, if shame is not painful, then being prone to experiencing shame may not matter very much. In our analyses, we therefore also investigated the importance of interactions between shame-proneness and shame aversion. As it has further been suggested that explicit and implicit motives interact in the generation of behavior (e.g., Gawronski, LeBel, & Peters, 2007), we examined the potential interactions that shame–pain associations may have with both shame-proneness and shame aversion.

The present investigation is based on the hypothesis that shame plays a central role in Cluster C PDs, with the relationship between shame and these disorders potentially being bidirectional. That shame may play an important role in these disorders is consistent with broader theories of PDs, especially as they relate to Cluster C. In cognitive theory (e.g., Beck, Freeman, & Davis, 2004), the schemas central to PDs include maladaptive basic beliefs, some of which may be related to shame. For example, Beck and colleagues (e.g., Beck et al., 2004) have suggested that avoidant personality disorder (APD) involves the belief that one is inadequate, and this negative evaluation of the self may lead to shame. According to Benjamin's (1993) interpersonal theory, shame may sometimes arise in PDs because of the characteristic ways of perceiving oneself and interacting with others that are created by pathogenic child–caregiver experiences. For example, dependent personality disorder (DPD) is posited to be associated with having overly nurturing and/or authoritarian parents who may prevent the child from developing autonomy and a sense of competence (Benjamin, 1993). This may reinforce a need to attach to others because exposing probable incompetence by acting without help could be shameful. Also, the disturbed self-representations and/or unconscious conflicts implicated in contemporary psychoanalytic theory (e.g., Kernberg, 1996) may lead to shame for some individuals with PDs. For example, in individuals with obsessive-compulsive personality disorder (OCPD), libidinal impulses are thought to be in conflict with the superego (Kernberg, 1996), and shame may arise when individuals succumb to these impulses and fail to live up to moral expectations (Lewis, 1971). Given all of these potential conceptual relationships, the present investigation posits that shame may be central to all three Cluster C PDs.

The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision; *DSM–IV–TR*; American Psychiatric Association, 2000) criteria also suggest that shame is relevant to Cluster C PDs. For example, some of the behaviors seen in APD are consistent with behavioral responses that are, by definition, associated with experiencing shame, such as escape and withdrawal. However, individuals with APD will engage in these kinds of behaviors before shame is likely to be experienced (e.g., failing to join social groups or take on jobs requiring interpersonal contact), perhaps in an attempt to avoid painful, undesirable feelings of shame. We therefore expected increases in shame aversion to be associated with increases in APD symptoms. Moreover, given that shame can be felt when in public or when alone if individuals are still aware of their defects (Tangney, Miller, et al., 1996), the strategies used to address one's aversion to shame in APD may not always be effective in reducing the frequency, intensity, and/or duration of all shame experiences. The pervasive social inhibition displayed by individuals with APD when encountering others may reflect a relatively consistent sense of shame. As these individuals generally view themselves as inadequate or inferior, we further expected APD to be associated with shame-proneness.

We also expected DPD to be associated with both shame aversion and shame-proneness. The tendency of individuals with DPD to avoid making decisions or doing things without reassurance may reflect attempts to avoid the expected negative results of their own perceived incompetence. The exposure of such incompetence would potentially elicit shame. Therefore, we hypothesized that DPD symptoms will be related to levels of shame aversion. Reducing the potential for shameful negative results in particular situations, however, would not alleviate all private experiences of shame, as the individual is likely to continue to believe that he or she is incompetent. If those with DPD view of themselves as incompetent individuals, then this would suggest that they may experience shame fairly frequently. Therefore, we also hypothesized that increases in shame-proneness would be associated with increases in levels of DPD symptoms.

Finally, the extreme organization, perfectionism, and workaholism seen in OCPD (American Psychiatric Association, 2000) may also represent strategies for avoiding shame. These qualities have the potential to assist in the pursuit of an ideal self and reduce the likelihood of exposing an imperfect or incompetent actual self, which would lead to experiences of shame (Lewis, 1971). Similar to APD and DPD, we therefore expected increases in OCPD symptoms to be associated with increases in shame aversion. However, individuals with this disorder may not always be able to use the above qualities effectively when implementing their plans to reach their high standards. If this is the case often enough, the individual may also be shame-prone. For example, a preoccupation with details and reluctance to delegate work to others may make it difficult for those with OCPD to finish tasks. Failing to complete tasks in accord with their high standards would likely increase the frequency of experiencing shame. We therefore expected that elevations in OCPD symptoms could be associated with increases in shame-proneness.

We also examined the importance of trait positive affect (PA) and negative affect (NA) in Cluster C PDs. Elevated levels of NA are common to most forms of psychopathology, and it has been suggested that NA can account for many psychological disorders (e.g., Watson, 2000). Deficits in pleasure and PA have also been found to be associated with a variety of mental disorders (e.g., Berenbaum & Oltmanns, 1992; Watson et al., 1995). We therefore examined whether shame would be associated with Cluster C PDs even after taking into account trait NA and PA. With these variables taken into account, we still expect that shame will be associated with Cluster C PD levels, given that the behaviors and self-perceptions relevant to these disorders are suggestive of shame in particular.

In summary, we hypothesized that increases in symptom levels of all three Cluster C PDs would be associated with elevated levels of shame aversion, shame-proneness, and shame–pain associations. Moreover, we expected that Cluster C PD symptoms would

be associated with the interactions among these shame-related variables. Finally, we expected that shame would be associated with Cluster C PDs even after taking into account trait PA and NA.

Method

Participants

Participants were 237 undergraduate students (62.0% women) between the ages of 18 and 27 years ($M = 19.2$ years, $SD = 1.5$). The majority of participants (57.0%) were White/Non-Hispanic, followed by 18.6% Asian American, 8.9% Hispanic/Latino(a), 8.0% African American, and 2.5% biracial; 4.6% chose to describe themselves as "other." Of these students, 187 (78.9%) were enrolled in an introductory psychology course and received course credit for participating.

To ensure that an adequate portion of the sample would have elevated symptoms of Cluster C PDs, we recruited additional participants ($N = 50$) from the greater undergraduate population through flyers posted around campus. These flyers described features of each of the Cluster C PDs and included contact information for interested individuals who felt these descriptions pertained to them. Those responding to any of the flyers were further screened for the possible presence of Cluster C PD symptoms using a brief e-mail questionnaire. Those respondents evidencing possible symptoms based on this questionnaire were invited to participate in exchange for monetary compensation. Participants recruited through flyers did not differ significantly from participants recruited through the introductory psychology course in gender, race, or ethnicity. However, participants recruited via flyers did tend to be older ($M = 20.2$ years) than those from the introductory psychology course ($M = 18.9$ years), $t(231) = 5.83$, $p < .01$. Mean scores on the measures used in this study for those participants recruited through the introductory psychology course, those recruited through the use of flyers, and the total participant sample can be found in Table 1.

Measures

PA and NA. Trait PA and NA were measured using the Positive Affect Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were presented with 10 positive emotional words (e.g., *interested*, *excited*) and 10 negative emotional words (e.g., *distressed*, *afraid*) and were asked to indicate how much they feel these emotions "generally," using a scale from 1 to 5. Although the PANAS typically includes *ashamed*, this item was removed when calculating the NA score to ensure that this measure was not also reflecting shame. Watson et al. (1988) reported that the PANAS has good convergent and discriminant validity with other measures of psychological functioning and distress, and its scores have good test–retest reliabilities (rs = .68 and .71 for PA and NA, respectively, after an eight-week retest interval) as well as internal consistencies (αs = .88 and .87 for PA and NA, respectively) using the general timeframe. In the present study, Cronbach's alpha was .83 for the PA scale and .87 for the nine-item NA scale.

Cluster C personality disorder symptoms. Symptoms of Cluster C PDs were assessed using the Cluster C portion of the Personality Disorder Interview–IV (PDI-IV; Widiger, Mangine, Corbitt, Ellis, & Thomas, 1995). This interview was administered (and audiotaped) by one of the investigators (Michelle Schoenleber), who had received training in its use. Each criterion was rated on a scale from 0 to 3, with 0 indicating the absence of a given symptom, 1 indicating subclinical presence of the symptom, 2 indicating clinically significant levels of the symptom, and 3 indicating severe levels of the symptom.[1] Three scores reflecting levels of APD, DPD, and OCPD were respectively computed by summing across the relevant diagnostic criterion scores.

The reliability and validity of the interview measures of Cluster C PDs were assessed in two ways. First, a second rater listened to 12 randomly selected interviews. Interrater reliabilities, measured using the intraclass correlation and by treating raters as random effects and the individual rater as the unit of reliability (Shrout & Fleiss, 1979), were .95, .94, and .89 for APD, DPD, and OCPD, respectively. Second, we examined the relations between the interview scores and questionnaire scores of a subsample ($N = 127$) that completed the APD, DPD, and OCPD items from the Schedule for Nonadaptive and Adaptive Personality–2 (SNAP-2; Clark, Simms, Wu, & Casillas, in press). Correlations between the PDI-IV and SNAP-2 were .68 for APD, .70 for DPD, and .56 for OCPD. All of these correlations were similar to or better than those previously reported regarding the relation between the original SNAP and the Structured Interview for *DSM–IV* Personality (Clark, 1993).

Shame-proneness. The shame items from the Test of Self-Conscious Affect–3 (TOSCA-3; Tangney, Dearing, Wagner, & Gramzow, 2000) were used to measure shame-proneness. The TOSCA-3 presents participants with 16 brief scenarios. After each scenario, the participant is provided with a statement intended to reflect a shame response. For example, the scenario "You are driving down the road, and you hit a small animal" is followed by "You would think: 'I'm terrible.'" Participants are asked to rate the degree to which they would experience the provided response on a scale from 1 to 5. Cronbach's alpha for the TOSCA-3 was .77 in this study, which is similar to the internal consistency reported by Tangney and colleagues in their research on college student samples (see Tangney, Wagner, et al., 1996). Also, the shame scale from the TOSCA-3 has shown expected relationships to psychological functioning and has shown good test–retest reliability (e.g., .85 in an undergraduate sample with a three- to five-week retest interval; Tangney, Wagner, Fletcher, & Gramzow, 1992).

Shame aversion. We developed the Shame-Aversive Reactions Questionnaire (ShARQ) to assess the degree to which individuals tend to perceive shame experiences as particularly painful and undesirable. For a pilot study prior to the present investigation, 24 items were originally generated to reflect shame aversion. Ten items were removed because either (a) the item reduced the internal consistency of the measure or (b) the item was more strongly correlated with a measure of a different construct than with the mean score of the ShARQ items not removed for the former reason. The 14 items on the ShARQ are rated on a 7-point

[1] The PDI-IV is typically used with a scale from 0 to 2; however, for this study, a subclinical rating was added. This change in the PDI-IV rating scale has been used previously (Berenbaum, Thompson, Milanak, Boden, & Bredemeier, 2008) and was developed in consultation with Thomas Widiger.

Table 1
Descriptive Statistics for Participants Recruited via Introductory Psychology Courses and Flyers and for the Total Sample

	Introductory psychology participants (N = 187)				Flyer-recruited participants (N = 50)				Total sample			
Variable	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max	*M*	*SD*	Min	Max
APD	0.5	1.7	0	14	5.4	5.5	0	17	1.6	3.5	0	17
DPD	0.5	1.4	0	11	3.5	4.2	0	15	1.1	2.6	0	15
OCPD	1.5	1.9	0	10	5.0	4.8	0	15	2.2	3.1	0	15
Positive affect	3.7	0.5	2.2	5.0	3.3	0.7	1.5	4.6	3.6	0.6	1.5	5.0
Negative affect	1.9	0.6	1.0	4.0	2.5	0.8	1.1	4.4	2.0	0.6	1.0	4.0
Shame aversion	3.4	0.9	1.5	5.9	4.6	1.1	2.1	6.4	3.6	1.0	1.5	4.4
Shame-proneness	2.9	0.5	1.5	4.3	3.3	0.6	1.8	4.4	3.0	0.6	1.5	4.4
Shame–pain associations	0.5	0.3	−0.4	1.3	0.6	0.4	−0.4	1.3	0.6	0.3	−0.4	1.3

Note. For shame–pain association statistics, n = 224. APD = avoidant personality disorder; DPD = dependent personality disorder; OCPD = obsessive-compulsive personality disorder.

Likert-type scale reflecting the degree to which the participant agrees with each statement (e.g., "Feeling inadequate troubles me more than anything else" and "I am comfortable acknowledging my own imperfections"). Half of the ShARQ items are reverse scored, with higher scores on the ShARQ indicating higher levels of shame aversion.

In the present study, the ShARQ displayed good internal consistency (α = .89). Using data from the current investigation as well as from our pilot study (N = 74) and a study we have currently underway (N = 121), it also appears that the ShARQ has acceptable convergent and discriminant validity. As would be expected, the ShARQ is positively correlated with other shame-related measures; for example, the correlations between the ShARQ and the TOSCA-3 shame scale ranges from .44 to .57 across these three studies. Our measure of shame aversion also shows predicted relationships with other psychological constructs as well. For example, the ShARQ is positively associated with the Anhedonic Depression Scale of the Mood and Anxiety Symptoms Questionnaire (r = .56; Watson et al., 1995) as well as with the Penn State Worry Questionnaire (r = .41; Meyer, Miller, Metzger, & Borkovec, 1990). Moreover, shame aversion should theoretically be related to the broader constructs of experiential avoidance and distress intolerance; in our ongoing study, the ShARQ shows predicted relationships to both the Acceptance and Action Questionnaire (r = .64; Hayes et al., 2004) and the Affect Control Scale (r = .55; Williams, Chambless, & Aherns, 1997). The ShARQ further displays good convergent validity in that it has consistently shown negative correlations with positive affect, measured using the PANAS and the expanded form of the PANAS in our studies (rs between −.32 and −.42). The ShARQ also shows no relationship to the TOSCA-3 guilt scale (r = −.002), suggesting that the ShARQ is addressing shame in particular rather than self-conscious emotions more broadly.

Implicit mental representations of shame–pain associations. To assess implicit mental representations of associations between shame and higher order pain and pleasure, we created a go/no-go association task (GNAT), drawing on the work of Nosek and Banaji (2001) as well as Teachman (2007). For the GNAT, participants classify words into broader categories to assess the strength of associations between those categories. In the current investigation, the GNAT was used to assess the strength of the associations that shame has with pain and pleasure. The strength of shame–pain associations is measured relative to shame–pleasure associations. During critical blocks, two categories serve as targets and appear continuously at the top of the computer screen. Stimulus words are then presented in the middle of the screen for a brief time. Participants are instructed to press the space bar (a "go" response) as quickly as possible whenever the presented stimulus belongs to one of the target categories. Stimulus words not belonging to the current target categories are considered distracters, and the participants are instructed not to press any key (a "no-go" response) whenever one of these words appears.

The GNAT included two critical blocks, during which *shame* was once paired with *pain* and once paired with *pleasure* as targets. Each block was composed of 15 practice trials and 84 critical trials. On the basis of recommendations in Nosek and Banaji (2001), a 4:3 ratio of targets to distracters was used such that the words on each of the target lists were presented twice and the words on the distracter list were presented three times during critical blocks. Word presentation was randomized within and across lists. The order of the shame–pain (SPA) and shame–pleasure (SPL) blocks was also randomized.[2] The response window was set at 1,000 ms for the distracter list and 1,400 ms for the target lists, following the procedure used in Teachman (2007). The interstimulus interval was 300 ms. Response latencies were recorded for all words eliciting a response, regardless of whether that response was correct.

In an effort to familiarize participants with the task, we administered practice blocks for all portions first, using words from Nosek and Banaji's (2001) fruit, bug, and animal word lists. The critical categories used here to assess shame–pain associations, however, were *shame*, *pain*, and *pleasure*. Three word lists with 12 words each were generated to reflect these categories, and these lists can be seen in Table 2. These lists did not statistically differ in terms of average word length or frequency of usage in the English language, according to Francis and Kučera (1982). Participants were told which words belong to each list, and they initially performed three randomly ordered single-category blocks consisting of 14 trials each to ensure they could distinguish between the categories.

[2] An independent samples t test revealed no significant differences based on the order of block presentation.

Table 2
Go/No-Go Association Task Word Lists

Shame	Pain	Pleasure
Inferior	Unsettling	Peaceful
Exposed	Troubled	Comfortable
Disgraced	Painful	Reassuring
Incompetent	Aching	Pleasing
Defective	Unbearable	Contented
Judged	Distressed	Enjoyable
Flawed	Suffering	Amused
Humiliated	Anguished	Relieved
Imperfect	Tormented	Joyful
Rejected	Excruciating	Relaxing
Inadequate	Agony	Pleasurable
Ridiculed	Upsetting	Delighted

Following Teachman (2007), we removed from analyses participants with overall error rates greater than 30% or with an error rate greater than 40% on either of the two critical blocks, as these rates may indicate that the participant did not fully understand how to perform the task. Eight participants were removed for these reasons. Furthermore, participants whose responses were faster than 300 ms on more than 10% of the critical trials were also removed, as this random responding indicates that the participant was not taking the task seriously. Another four participants were removed on the basis of this consideration. Finally, one other participant was removed from these analyses because she was unable to complete the entire study due to time constraints. For those participants remaining in the analyses (n = 224), errors and responses under 300 ms were removed from further calculations and analyses.

To examine individual differences in the strength of associations between shame and pain, we calculated a *D* statistic for each participant, following recommendations in Greenwald, Nosek, and Banaji (2003). Although signal detection analyses can be used with the GNAT, we used response latencies because it has been suggested that this may be more reliable (see Nosek & Banaji, 2001). Mean response latencies for the critical trials of target stimuli were calculated separately for each of the two critical blocks, resulting in separate mean response latencies for the SPA and SPL blocks. The difference between these two mean scores was divided by the standard deviation across critical trials for both critical blocks. Because shame is generally considered to be an unpleasant emotion, we expected the majority of participants to show a stronger association between shame and pain than between shame and pleasure. Therefore, the mean response latency for the SPA block was subtracted from that of the SPL block to ensure that *D* was a positive value for most participants. As expected, most participants (95.5%) had a positive *D* value. Following other researchers who have used the GNAT (e.g., Nosek & Banaji, 2001; Teachman, 2007), we based inferences about the implicit mental representations of the association strength between targets in each respective block on the speed with which participants could classify words. GNAT *D* values thus represent the participants' strength of associations between shame and more general pain relative to the strength of associations between shame and general pleasure. Split-half reliability was calculated for the GNAT by producing two *D* values, each reflecting a random half of the critical trials across both critical blocks. For our GNAT, r = .69, indicating generally acceptable levels of reliability; in fact, this level of reliability is rather high for indirect measures (see, e.g., Bosson, Swann, & Pennebaker, 2000, for a review of reliability in indirect measures of self-esteem).

Results

We began by examining whether our sample included individuals with clinically significant levels of Cluster C PD symptoms. When measured categorically, 18 participants (7.6%) met *DSM–IV–TR* diagnostic criteria for at least one Cluster C PD, with five of them meeting criteria for two Cluster C PDs and one participant meeting criteria for all three Cluster C PDs. An additional 14 participants (5.9%) exhibited subthreshold levels of at least one Cluster C PD, with one of them meeting subthreshold criteria for two Cluster C PDs.[3] Finally, three participants met threshold criteria for two disorders as well as meeting subthreshold criteria for the remaining disorder. Thus, all told, 35 participants (14.8%) met at least subthreshold criteria for at least one Cluster C PD.

Because of the lack of evidence indicating that Cluster C PDs are taxonic, in the data analyses presented below, we used dimensional rather than categorical Cluster C PD scores. Descriptive statistics for the total sample, as well as for the portions of the sample recruited through the introductory psychology course and through the use of flyers, were presented in Table 1. Correlations among all variables for the total sample are presented in Table 3.

We next examined whether any shame-related variables would significantly predict levels of Cluster C PDs over and above demographic and trait mood variables. To do so, we conducted a separate hierarchical multiple regression analysis for each of the Cluster C PD scores. As can be seen in Table 4, we entered age and gender in the first step. Age was only associated with levels of APD, with relatively older individuals exhibiting higher levels of symptoms. Gender was associated with APD and DPD but not OCPD. Women tended to endorse greater levels of APD and DPD. Positive and negative affect were entered in the second step. Elevations in Cluster C PD symptom levels were associated with both higher levels of NA and lower levels of PA, except that OCPD was not significantly associated with PA.

The addition of shame aversion, shame-proneness, and shame–pain associations in the third step significantly improved the prediction of the Cluster C scores. Thus, the shame variables were associated with the Cluster C scores even after taking into account NA and PA.[4] However, shame aversion was the only shame-related construct to contribute to the prediction of all three Cluster

[3] According to Widiger et al. (1995), three clinically significant criteria are necessary for subthreshold levels of APD, four for DPD, and three for OCPD.

[4] We also ran the hierarchical multiple regressions, entering the shame-related variables in the second step and the affect-related variables in the third step. Consistent with the findings reported above, shame aversion predicted levels of all three Cluster C PDs and shame-proneness predicted levels of APD and DPD but not OCPD. It is interesting that after taking the shame-related variables into account, NA was only predictive of APD and DPD and PA was only predictive of APD. Neither NA nor PA significantly predicted levels of OCPD when the shame-related variables had already been entered into the regression. Thus, trait affect does not appear to predict levels of Cluster C PDs over and above shame-related constructs as consistently as shame predicts Cluster C PDs levels beyond trait affect.

Table 3
Correlations Among Cluster C Personality Disorders, Trait Mood, and Shame-Related Variables (N = 237)

	Cluster C personality disorders			Trait mood		Shame		
Variable	1	2	3	4	5	6	7	8
1. APD	—	.64**	.47**	−.40**	.49**	.56**	.44**	.09
2. DPD		—	.33**	−.31**	.44**	.50**	.44**	.14**
3. OCPD			—	−.20**	.29**	.40**	.33**	.05
4. Positive affect				—	−.26**	−.42**	−.24**	−.07
5. Negative affect					—	.49**	.32**	.01
6. Shame aversion						—	.57**	.07
7. Shame-proneness							—	.01
8. Shame–pain associations								—

Note. For correlations involving shame–pain associations, $N = 224$. APD = avoidant personality disorder; DPD = dependent personality disorder; OCPD = obsessive-compulsive personality disorder.
** $p < .01$.

C scores; shame-proneness predicted APD and DPD but did not predict OCPD.

We then considered whether the shame variables would contribute to the prediction of Cluster C PD symptom levels via their interactions by entering the two-way interactions among the shame-related variables in the fourth step and the three-way interaction in the fifth step. As seen in Table 4, the addition of the set of two-way interaction terms predicted levels of all three Cluster C scores above and beyond the independent contributions of shame aversion, shame-proneness, and shame–pain associations. The Shame Aversion × Shame-Proneness interaction term was the only interaction significantly associated with all three Cluster C scores. Furthermore, we found a significant three-way interaction among the shame-related variables for DPD. Specifically, shame–pain associations were significantly associated with DPD among individuals high in shame-proneness and shame aversion ($\beta = .32$, $p < .01$) but not among individuals with low levels of shame-proneness and/or shame aversion.

Finally, we further examined the significant two-way interactions following Aiken and West (1991). As depicted in Figure 1, shame-proneness was associated with APD when shame aversion was high ($\beta = .53$, $p < .01$) but was not associated with APD when shame aversion was low ($\beta = -.07$, $p = ns$). The results for DPD and OCPD displayed the same association as was found for APD, with shame-proneness associated with these disorders at high levels of shame aversion ($\beta = .50$ and $\beta = .49$, all $ps < .01$, for DPD and OCPD, respectively) but not at low levels of shame aversion ($\beta = -.13$, and $\beta = -.02$, all $ps = ns$, for DPD and OCPD, respectively). In other words, individuals with high shame-proneness displayed greater levels of Cluster C PD symptoms only when they were also high on shame aversion.

Table 4
Summary of Hierarchical Multiple Regression Analyses Predicting Cluster C Personality Disorders (N = 224)

	APD		DPD		OCPD	
Variable	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.04*		.03*		.02
Age	.16*		.09		.11	
Gender	.14*		.17*		.09	
Step 2		.25**		.19**		.19**
Positive affect	−.27**		−.23**		−.10	
Negative affect	.38**		.33**		.20**	
Step 3		.12**		.13**		.13**
Shame aversion (ShARQ)	.30**		.25**		.29**	
Shame-proneness (TOSCA)	.17*		.21**		.14	
Shame–pain associations (GNAT)	.06		.10		.03	
Step 4		.10**		.13**		.08**
ShARQ × TOSCA	.33**		.32**		.31**	
ShARQ × GNAT	.06		.11		−.05	
TOSCA × GNAT	.00		.06		.02	
Step 5		.00		.01*		.01
ShARQ × TOSCA × GNAT	.07		.16*		.12	

Note. APD = avoidant personality disorder; DPD = dependent personality disorder; OCPD = obsessive-compulsive personality disorder; ShARQ = Shame-Aversive Reactions Questionnaire; TOSCA = Test of Self-Conscious Affect–3; GNAT = go/no-go association task.
* $p < .05$. ** $p < .01$.

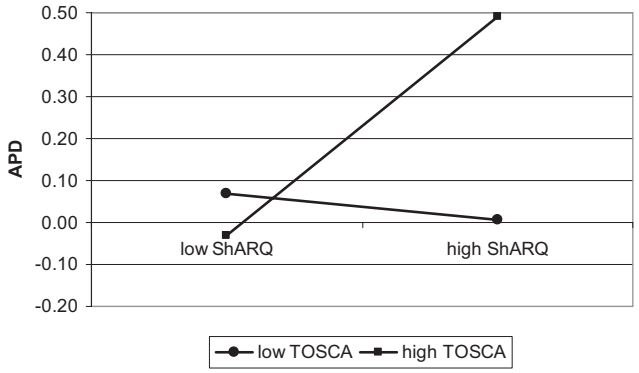

Figure 1. Two-way interactions between shame aversion and shame-proneness for levels of avoidant personality disorder (APD). ShARQ = score on the Shame-Aversive Reactions Questionnaire; TOSCA = score on the Test of Self-Conscious Affect–3.

Discussion

As predicted, we found that shame was associated with Cluster C PDs. Individuals who endorsed elevated levels of Cluster C PD symptoms not only tended to be more prone to experiencing shame but were also more likely to describe shame as an especially aversive, unpleasant emotion. Moreover, levels of DPD were also significantly correlated with an individual's degree of automatic association between shame and pain, although this association was limited to individuals with elevated levels of both shame-proneness and shame aversion.

The results of the present research indicate that in addition to being associated with psychological problems such as depression, anxiety, and aggression (e.g., Tangney & Dearing, 2002; Tangney et al., 1992), the propensity to experience shame across situations is also associated with levels of Cluster C PD symptoms. Perceptions of oneself as inadequate or incompetent in particular situations are common for those with APD and DPD. Each of these self-evaluations appears likely to elicit shame. Even those with OCPD may experience shame at times, as everything short of perfection is thought to be a shameful failure.

In the present study, we also proposed a novel shame-related construct—shame aversion—and tested the hypothesis that it would be associated with Cluster C PDs. We posited that experiencing shame readily may not fully predict the preemptive avoidance of social interactions seen in APD, the shirking of responsibility without even attempting tasks seen in DPD, or the excessive planning and organizing seen in OCPD. We had therefore proposed that such symptoms would be related to the perception of shame as an unwanted, unbearable emotion. Individuals for whom shame is particularly painful may be more likely to attempt to avoid or effectively manipulate situations that have the greatest potential for eliciting that emotion.

In support of our hypothesis, we found that shame aversion was significantly associated with levels of all three Cluster C PDs. It is important to note that this was true even when taking shame-proneness into account, indicating that shame aversion is not redundant with shame-proneness. In fact, although our results suggest that shame-proneness is important in Cluster C PDs, its relevance appears somewhat limited in that shame-proneness only matters if shame aversion is high.

It will be important for researchers conducting future studies to attempt to replicate and extend the present findings regarding shame and Cluster C PDs with other samples (e.g., treatment-seeking individuals, individuals from a wider age range) to provide a fuller understanding of shame's relationship to Cluster C PDs. For example, further research using older samples will be necessary before assuming that our results would generalize outside of the young adult population.

In particular, our use of an undergraduate sample may have limited our findings. Although our recruitment strategies led to a larger proportion of participants with elevated levels of Cluster C PD symptoms than would be expected in a typical sample of young adults (see, e.g., Thomas, Turkheimer, & Oltmanns, 2003), it remains the case that only a small minority of participants met full diagnostic criteria for a Cluster C PD. In addition, by limiting our participants to college students, we may have inadvertently excluded some of the most extreme cases of Cluster C PDs; for example, individuals with extreme levels of DPD traits may be unwilling to separate from their parents or caregivers so that they may attend college. Therefore, although this study provides important information regarding the role of shame in Cluster C PDs, it will be important to determine whether our findings will replicate in samples with larger numbers of individuals with Cluster C PDs, including some individuals with extremely high levels of Cluster C PD symptoms.

Given our findings, we also believe it will be valuable for future research to examine whether shame aversion is associated with other psychological problems. In particular, we recommend that future research examine the role that shame aversion may play in other forms of personality pathology. For example, some individuals with narcissistic personality disorder are sensitive to rejection and criticism (e.g., Russ, Shedler, Bradley, & Westen, 2008; Wink, 1991). These individuals may present themselves as superior to mask their own insecurity and low self-esteem. A possible explanation for this desire to hide may be to avoid experiencing feelings of shame that may accompany the exposure of their more unpleasant features. Likewise, given that individuals with borderline personality disorder are thought to have considerable difficulty tolerating distressing emotions in general (e.g., Gratz, Rosenthal, Tull, Lejeuz, & Gunderson, 2006; Linehan, 1993) and that they frequently view themselves as bad or evil (American Psychiatric Association, 2000; Linehan, 1993), shame aversion may be associated with borderline personality disorder as well. However, investigating other PDs for which no association between features of the disorder and shame aversion would be predicted may be useful for improving the discriminant validity of the construct. For example, given that one symptom of antisocial personality disorder is a lack of remorse (American Psychiatric Association, 2000), we would not expect shame aversion to be associated with that disorder. This empirical question also remains to be addressed in the future.

Some researchers have argued that NA can largely account for some psychological disorders (e.g., Watson, 2000). However, our results indicate that shame-proneness is associated with levels of Cluster C PDs over and above trait levels of NA. It is worth pointing out, however, that we did not use the expanded version of the PANAS in the present study, which would have provided us with a broader measure of NA that would have included sadness and depression. A relationship between shame and depression has

been found across several studies (e.g., Tangney et al., 1992; Thompson & Berenbaum, 2006); therefore, in future studies, researchers should consider measuring depressive affect in particular to determine whether shame is relevant to Cluster C PDs over and above sadness and depression.

We did not include measures of the aversiveness of unpleasant emotions other than shame. It is possible that individuals with elevated levels of APD, DPD, and/or OCPD find all unpleasant emotions equally aversive. For example, Beck and colleagues (e.g., Beck et al., 2004) have asserted that individuals with APD have a low tolerance for unpleasant emotions overall. Given the thoughts and behaviors seen in people with Cluster C PDs, however, we expect that shame is especially aversive for individuals with these disorders, even in comparison to other unpleasant emotions. Future investigations will be necessary to examine whether shame aversion has any special relevance for individuals with Cluster C PDs.

Our implicit measure of shame–pain associations was related to DPD, as we had predicted, even though shame–pain associations were not correlated with the explicit shame-related measures. Thus, it appears that the GNAT is not simply assessing the same construct as the ShARQ or the TOSCA-3. Although implicit and explicit measures are typically correlated, albeit not strongly, it is worth noting that we are not the first researchers to find an implicit measure predicting a criterion variable even though it is not associated with conceptually related explicit measures (e.g., McClelland et al., 1989; Tamir, Chiu, & Gross, 2007). Other researchers have attempted to explain why studies find that implicit and explicit measures are not correlated. For example, McClelland et al. (1989) asserted that implicit and explicit measures assess different motivations for behavior. Individuals may hold an implicit motive even when they do not describe themselves as having it, whereas explicit or self-attributed motives are those they do consider themselves to hold. In their review, McClelland et al. (1989) noted that these different motivations may be useful in the prediction of different outcomes; for example, self-attributed motives are more commonly associated with fairly immediate decisions and actions, whereas implicit motives tend to be associated with trends in behavior seen across time. As another example, according to Gawronski and Bodenhausen's (2006) associative-propositional evaluation model, responding on implicit and explicit measures reflects differing mental processes. Implicit measures reflect the activation of associations in memory without regard to the individual's belief in the veracity of the associations. In contrast, explicit measures reflect the validation of these associations—whether the association is subjectively regarded as true. On explicit measures, individuals are therefore capable of disagreeing with their own responses on implicit measures to varying degrees. When activated associations are found to be incongruent with other propositions or knowledge, the associations are rejected as false on explicit measures. It is important to note that in both of the above explanations, it is further suggested that both implicit and explicit measures have the potential to enhance the prediction of behavior, either separately or via interactions. This being the case, we believe it will be valuable for future research to include implicit measures alongside more commonly used explicit measures.

Overall, the results of this study indicate that both shame-proneness and shame aversion are important in Cluster C PDs. Shame–pain associations were particularly related to DPD. We further expect that shame aversion will be relevant to other forms of psychopathology and suggest that researchers interested in shame's relationship to psychological problems consider the implications of perceiving shame as particularly painful and undesirable. We also hope that this study will engender further research into Cluster C PDs, especially as they relate to shame.

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