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ACCEPTANCE

This dissertation, THE RELATIONSHIPS AMONG MULTIDIMENSIONAL PERFECTIONISM, SHAME AND TRICHOTILLOMANIA SYMPTOM SEVERITY, by CHRISTINA L. NOBLE, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

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- Ashby, J., Dickinson, W., Gnilka, P., & **Noble, C.** (2011). Hope as a mediator and moderator of multidimensional perfectionism and depression in middle school students. *Journal of Counseling & Development*, 89(2), 131-139.

Book Chapters

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Government Reports

- Gnilka, P., **Noble, C.**, Ashby, J., & Meyers, J. (2010). Gwinnett County Student Health Survey 2008-2009 Report.

THE RELATIONSHIPS AMONG MULTIDIMENSIONAL PERFECTIONISM,
SHAME AND TRICHOTILLOMANIA SYMPTOM SEVERITY

by
Christina L. Noble

ABSTRACT

The purpose of this study was to explore the relationship between multidimensional perfectionism, shame and Trichotillomania (TTM) symptom severity in a sample of college students and a clinical sample of individuals with TTM. A total of 286 college students were recruited from a large, Southeastern public University and 114 individuals with TTM were recruited across at a conference for individuals with TTM and TTM-focused social media communities. The study sought to explore whether shame (characterological, behavioral or bodily) mediated the relationship between wither adaptive or maladaptive perfectionism and TTM symptom severity. Correlations and tests of means were conducted and the Preacher and Hayes macro with bootstrapping was utilized to test mediation and moderation with the following measures: the Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001), the Massachusetts General Hairpulling Scale (MGH-HPS; Keuthen et al., 1995, and the Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002). Results suggested that the clinical sample reported significantly higher levels of all three types of shame, as well as significantly higher scores for TTM severity than the student sample. No mediation or moderation was found among the variables for the student sample. In the clinical sample, no significant moderation was found, but behavioral shame was significantly mediated the relationship between maladaptive perfectionism and TTM severity. A discussion of

limitations, implications for practitioners, and directions for future research were provided.

THE RELATIONSHIPS AMONG MULTIDIMENSIONAL PERFECTIONISM,
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by
Christina L. Noble

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the Department of Counseling and Psychological Services
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Atlanta, Georgia
2012

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Christina Noble
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CHAPTER 1
SHAME AND SELF-INJURIOUS BEHAVIORS:
IMPLICATIONS FOR CLINICIANS WORKING WITH NONSUICIDAL SELF-
HARM, TRICHOTILLOMANIA AND DERMATILLOMANIA

Shame has gained considerable interest amongst researchers and practitioners due to its significant role in mental health related issues (e.g., Brown et al., 2009). Labeled as an “exceedingly difficult condition to recognize and diagnose,” it has been suggested that shame is “frequently bypassed or unacknowledged” by therapists and avoided by clients (Pattison, 2000; p. 30). This may be particularly harmful for clinicians working with clients who exhibit self-injurious behaviors (SIBs), as research suggests that shame is a frequent and pernicious feature of these disorders (e.g., Hayes, Storch & Berlanga, 2009).

Given their prevalence and negative impact on social or occupational functioning, self-injurious behaviors (SIBs) such as nonsuicidal self injury (e.g., cutting, burning, hitting oneself), trichotillomania (i.e., compulsive hairpulling), and dermatillomania (i.e., compulsive skinpicking) have drawn significant attention in the psychological literature (Bohne, Wilhelm, Keuthen, Baer, & Jenike, 2002; Christenson, Mackenzie, & Mitchell, 1991; Flessner & Woods, 2006; Wilhelm et al., 1999; Teng, Woods, Twohig, & Marcks, 2002). Although these behaviors serve a number of functions, such as regulating emotional states (Christenson, Ristvedt, & Mackenzie, 1993; Diefenbach, Mouton-Odum, & Stanley, 2002; Keuthen et al., 2000), research suggests that many individuals experience such shame and embarrassment from their SIBs that they withdraw from social activities and avoid seeking help to recover from these conditions (Hayes, Storch & Berlanga, 2009; Keuthen et al., 2000; Stemberger, Thomas, Mansueto, & Carter, 2000;

Wilhelm et al., 1999). For others, feelings of low self-worth and shame can be motivators to punish the self through physically harming the body, resulting in cyclical patterns of SIBs and further shame feelings (Yip, 2006).

Though shame appears to be a common factor that is present in these related disorders, it is likely that shame plays different roles in the ways that the disorders originate and are maintained. Parsing the role of how shame typically occurs in the context of each of these disorders (e.g., as a catalyzing force, a maintainer of behavior, a barrier to help-seeking) has valuable implications for treatment. The purpose of this article is to review current literature and research on the relationships between shame and SIBs in the service of connecting current conceptual and empirical literature with our practical understanding of the experience of shame for individuals struggling with these issues. In addition, this article will provide suggestions for utilizing shame-based interventions to support and foster change in clients with SIBs.

Shame as a Construct

Tangney (2001) describes shame as a “global, painful, and devastating experience in which the self, not just behavior, is painfully scrutinized and negatively evaluated” (p. 599). A highly aversive, self-conscious and self-condemning emotion, shame is coupled with a global belief that the self is unacceptable (Haidt, 2003; Tangney & Dearing, 2002). Similarly, Lewis (1971) suggests that an individual has significant issues with shame when the self, as opposed to the individual’s actions or behavior, is seen as undesirable. Lewis purports that this negative self-focus is compounded by shame-oriented individuals’ difficulties with drawing distinctions between their actions and their more fundamental sense of self. For example, shame-oriented clients will describe an addictive

or compulsive behavior (e.g., drugs, alcohol, gambling) as part of their nature, rather than something that can be changed or controlled. Unable to separate the self from the behavior, these clients would likely struggle to take reparative action.

Although it is often compared to the other self-conscious emotions, such as guilt and embarrassment, shame differs in some notable ways. Roseman (1984) proposed that shame results in the perception of being disapproved of by other people. Similarly, Gilbert (1998) suggests that shame is associated with a global sense of personal inadequacy, failure or badness rather than the guilt-centered feeling of regret about an action taken. In contrast, guilt may catalyze action tendencies to correct perceived misdeeds (Gilbert). In addition, internal shame beliefs (e.g., “I am bad or flawed”) often contribute to external shame beliefs (e.g., “Others view me as bad or flawed”). Gilbert posits that it is external shame that leads to tendencies to hide aspects of the self or behaviors. With these intricacies and theoretical bases in mind, a number of researchers have dedicated themselves to the assessment of shame.

There are two major classifications in the assessment of shame: trait shame and state shame (see Rivzi, 2009 for a review). Trait measures of shame (i.e., global measures of dispositional proneness to experience shame) indicate a variety of different phenomena. These assessment tools evaluate shame through a number of different factors and constructs; likelihood of shame responses, frequency of shame thoughts or feelings, domain-specific shame about particular aspects of the self such as characterological shame, bodily shame or behavioral shame, or personal associations of the self with shame-related words, among others. In contrast, state-based measurements of shame determine how much shame an individual is feeling in any given moment. Rivzi also

asserts that different combinations of state and trait shame can be experienced by an individual at different times and across different contexts.

Tracy, Robins, and Tangney (2007) suggest that shame is characterized by a number of emotions, perceptions, sensations, and verbal and non-verbal behaviors both during and after the shame experience. Lewis notes that shame “results in the disruption of ongoing, exploratory behavior (and) creates both confusion in thought and the inability to speak” (2000, p.629). The global, negative affect of shame is often accompanied by a feeling of shrinking, of being small and powerless, and a sense of being exposed (Chao, Cheng & Chiou, 2011; Tangney, 2001; Tangney et al. 1998). Goldberg (1991) cites some physical, bodily indicators of the shame response, including gaze aversion, lowering the head, blushing, perspiration, and tearfulness. Acting submissive to appease others or displaying anger to redirect attention away from the shameful experience are examples of commonly observed behavioral patterns (Tangney, 2001). Tangney & Dearing (2002) suggest that shame moves one into a state of seclusion and isolation, whether this is through more active means, such as externalizing blame, or through more passive withdrawal from the interpersonal situation in question.

A number of authors have noted that shame is inextricably linked to body-relevant issues, particularly when behaviors around the body are perceived as dysfunctional, atypical, or uncontrollable. According to Lewis (1971), shame is more strongly correlated with self-consciousness, self-imaging, and greater body awareness than other self-conscious emotions, such as guilt. Similarly, Broucek (1991) stated that “any loss of control over one’s body, mental functions or emotions is an elicitor of shame” (p. 38). Nussbaum (2004) additionally suggested that disgust and shame often involve concerns

about body-relevant norms, such as appearance and hygiene. Although research suggests significant relationships between shame and maladaptive, body-focused behaviors, there has been little work done to evaluate and compare shame in different types of SIBs (i.e., non-suicidal self-injury, trichotillomania, and dermatillomania).

Self-injurious behaviors

Definitions and Prevalence

Non-suicidal self-injury (NSSI) is a term that describes any behavior that results or is likely to result in damage to bodily tissue, and wherein the intent of the injurer is to cause damage, but not death, to the self (Muelenkamp et. al, 2010). Forms of NSSI can include actions such as cutting, burning, scratching and hitting oneself, all of which may or may not cause physical damage to the individual (Silverman, Berman, Sanddal, O'Carroll, & Joiner, 2007). The behaviors can be enacted with the person's own hands, as well as with "preferred instruments," such as pencil tips, pins, glass shards, scissors, scalpels, razor blades, and box cutters (Woldorf, 2005).

Although any area of the body can serve as a target for NSSI, the most frequently targeted areas are the wrists, arms, ankles, inner thighs, feet, abdomen, and bra and underwear lines (Hicks & Hinck, 2007). Hicks & Hinck posit that the intentional act of tissue destruction serves to shift overwhelming emotional pain into more acceptable physical pain, and provides the injurer with tissue damage as a visual demonstration of extreme emotional distress. Some additional reasons for NSSI include emotional avoidance and numbing, feeling in control, asking for help in a nonverbal manner, and manipulating situations and people (Starr, 2004; Yip, 2006).

Researchers have consistently found relationships between NSSI and a number of psychological conditions, such as Posttraumatic Stress Disorder (Zlotnik, Mattia, & Zimmerman, 2001; Sacks, Flood, Dennis, Hertzberg, & Beckham, 2008), Borderline Personality Disorder (Brown, Comtois, & Linehan, 2002), Dissociative Disorders (Briere & Gil, 1998), Substance abuse (Zlotnik, et al., 2001), Anxiety disorders (Haw et.al, 2001), and Mood disorders (Haw, Houston, Townsend, & Hawton, 2002). Risk factors associated with NSSI include childhood physical and sexual abuse, parental insecure attachment (Gratz, Conrad, & Romer, 2002), and impulsivity (Simeon & Favazza, 2001).

Prevalence estimates suggest that 3 million people in the United States engage in NSSI (Van Sell et. al, 2005). In clinical populations, reported rates of NSSI range widely depending on the diagnoses of the population. Zanarini, Frankenburg, Hennen and Silk (2003) found rates of NSSI as high as 80.1% in inpatient samples with Borderline Personality Disorder. In inpatient samples with clinical depression, studies report rates ranging from 31% to 70% (Briere & Gil, 1998; Haw et al., 2001). Research suggests that prevalence rates range from 11% -38% in college student populations (Gratz, 2001; Whitlock, Eckenrode, & Silverman, 2006). This is in comparison to rates of around 4% in adult non-clinical populations (Klonsky, Oltmanns & Turkheimer, 2003). These statistics suggest that NSSI is and will continue to be a relevant issue for clinicians and clients alike.

Shame and Non-suicidal Self-injury

A number of authors point to shame as both a catalyst in the etiology of NSSI and a maintaining force in these behaviors. This is to say that individuals who self-injure are likely to have experienced feelings of shame and low self-worth prior to their first

episode of NSSI, with these feelings contributing to the onset of the self-harming behaviors (Yip, 2006). Yip postulates that self-injurers have been taught that emotions and urges such as anger and desire are bad, and that they must be punished for experiencing them. NSSI is maintained through a “release of endorphins after the physical damage contributes to a feeling of relief and an addictive maladaptive coping cycle of pain, relief, shame and self-hate” (p. 145). Individuals who self-harm report mounting tension leading up to an episode, giving rise to “seemingly irresistible urges to self-injure...and dissociation just before engaging in self-injury,” with the episode followed by “guilt, embarrassment, self-hatred and anger, thus fueling the next cycle” (p. 197; Woldorf, 2005). Herpetz (1995) suggests that typical shame triggers, such as rejection and failure, are also triggers for NSSI acts.

Engaging in self-injury feeds into a destructive, self-perpetuating cycle of shame, wherein the person feels ashamed of the “bad or weak” person she perceives herself to be as well as the inability to stop the self-harming behavior (Brown et al., 2009). Kelter and Harker (1998) suggest that shame may be specifically associated with NSSI, as one function of shame is to restore important relationships by motivating the individual to acknowledge that they have acted wrongly and to accept punishment. They posit that when global evaluations of the self as negative and immoral become extreme, self-hatred can lead to punishment of the self in hopes of redemption and reconnection. The double bind of NSSI is that the behavior simultaneously serves as a visual plea for help, as well as an isolating source of shame that the person is compelled to conceal and perform repeatedly in secret (Starr, 2004)

Shameful self-concealment is widely reported among people who self-injure. This takes place in many forms, including wearing baggy, heavy clothes or showing avoidance of situations wherein their bodies will be seen by other people (Derouin & Bravender, 2004). Brown et al. (2009) note that the “link between shame and NSSI may be especially strong since shame is most associated with self-hatred and hiding problems in therapy” (p. 816). These authors suggest that self-injurers are likely to feel ashamed that they are engaging in SIBs, and that this shame creates a cycle of concealment and inhibits help-seeking behaviors. Shame can also prevent clients from disclosing triggers for NSSI, such as childhood history, personal characteristics, and past and current behaviors, thus perpetuating and maintaining cycles of self-harm.

Trichotillomania

Definitions and Prevalence

Trichotillomania (TTM) is an SIB that is characterized by repetitive hair pulling, primarily from the scalp, eyebrows, and eyelashes, which results in noticeable hair loss (Christenson et al., 1991). The damage in TTM can range widely, with the severity and physical impact of the pulling varying from more superficial, cosmetic loss to serious loss, infection, and permanent hair loss (Keuthen et al., 2001). Individuals with TTM typically experience an upsurge in tension prior to a pulling episode, as well as feelings of relief, release, or pleasure while engaging in what is referred to as focused or intentional pulling behavior (Duke et al., 2010). A number of authors have argued for exclusion of pre-pulling tension in making a diagnosis of TTM (Christenson et al., 1991; du Toit, van Kradenburg, Niehaus, & Stein, 2001), as some individuals with TTM only report habitual hair pulling in the absence of tension, with this type of pulling referred to

as automatic or unfocused pulling. This calls into question current diagnostic criteria, suggesting both a possible exclusion of the criteria of precipitating tension in the DSM-V, as well as the need for evaluating both impulsive and compulsive features of TTM (Duke et al., 2010).

TTM commonly co-occurs with a range of other disorders, including obsessive compulsive disorder, major depressive disorder, and generalized anxiety disorder (Lochner, Simeon, Niehaus, & Stein, 2002), and can have serious physical, social, and emotional consequences (Keuthen et al., 2001). More common than previously thought, estimates of TTM from university surveys suggest that 1.5% of males and 3.4% of females endorse hair pulling to a clinically significant degree, with .6% endorsing all diagnostic criteria of TTM (Christenson, Pyle, & Mitchell, 1991). Surveys of university students indicate that nonclinical hair pulling behaviors are found in up to 15.3% of these participants (Stanley, Borden, Bell, & Wagner, 1994).

Shame and Trichotillomania

A number of authors (e.g., Castai et al., 2000) suggest that shame is an emotional consequence of TTM behaviors, but little support exists for shame as an initial catalyst for this set of behaviors (i.e., that higher levels of shame lead to the onset of the disorder). Instead, individuals with TTM commonly report negative self-referencing emotions such as shame in response to their hair pulling, as well as frustrations with being unable to control these behaviors (Casati et al., 2000; du Toit et al., 2001; Stemberger et al., 2000). Soriano and colleagues (1996) found that shame and low self-esteem are frequent experiential consequences of the inability to stop engaging in TTM behaviors. Woods et al. (1999) suggest that this internalized shame is compounded by negative and

unsupportive responses from others who do not understand the nature of the disorder, simply suggesting that the cure is to ‘just stop pulling.’

Compulsive hair pulling can also negatively impact an individual’s social functioning, engagement in recreational activities, and pursuit of self-care practices for fear that hair loss will be discovered (e.g., du Toit et al., 2001; Stemberger et al., 2000). Individuals with TTM report that hair pulling can be socially isolating, with many keeping hair pulling a secret from even close friends and family. Stemberger et al. also note that compulsive hair pulling can contribute to increased conflicts and decreased sexual intimacy in marriages, thus significantly impacting the quality of these interpersonal relationships. In addition to strained social relationships, sufferers may avoid contact with medical providers due to shame surrounding self-inflicted hair loss (O’Sullivan et al., 1996; 1997). This avoidance enables the continuation of the physical and mental cycles of the disorder, as well as the cycle of shame inherent in them.

Dermatillomania

Definitions and Prevalence

Dermatillomania, also referred to as compulsive skin-picking, pathological skin picking, and psychogenic excoriation, involves the repetitive, intentional scratching, abrading or picking at normal skin, skin with minor blemishes, scabs or insect bites (Hayes et al., 2009). The picking results in noticeable injury or disfigurement that can include disfiguring scars and significant infections (Greisemer, 1978; Odlaug & Grant, 2008; Wilhelm et al., 1999). Fingers and instruments (e.g., pins, tweezers) are the most common methods of manipulating the skin in dermatillomania (Bohne et al., 2002), and areas of the body that are most frequently targeted include the face, back, neck, or scalp

(Arnold et al., 1998; Keuthen et al., 2000). Studies suggest that individuals with dermatillomania tend to be female and usually engage in these behaviors for extended periods of time (Arnold et al., 1998). Similar to NSSI and TTM, research suggests that skin pickers use these behaviors to regulate unpleasant emotions, cognitions, or sensations (Flessner and Woods, 2006; Keuthen et al., 2000).

Dermatillomania has been associated with a number of other conditions, such as alcohol abuse or dependence, obsessive-compulsive disorder, mood disorders, and anxiety disorders (Arnold et al., 1998; Bloch, Elliott, Thompson, & Koran, 2001; Simeon et al., 1997; Wilhelm et al., 1999). Although seemingly innocuous, CSP can result in significant impairment. For example, Arnold et al. (1998) found that 12% of an inpatient sample of chronic skin pickers reported suicidal ideation as a result of severe, skin picking-related problems.

Current research suggests that skin picking is a common behavior in the general population and can range widely in frequency and severity (Bohne et al., 2002). Keuthen et al., (2000) estimated that approximately 2–4% of the population engages in pathological skin picking. Bohne and colleagues found that over 77% of a sample of German college students engaged in at least one skin-picking episode on a daily basis, with 4.6% reporting significant impairment due to their skin picking. Similarly, Hayes et al. (2009) found that 62.7% of an American community sample engaged in some form of skin picking, defined as any picking, rubbing, or scratching of one's own skin, and 11.2% reported engaging in severe, self-injurious skin picking.

Shame and Dermatillomania

A number of authors have suggested that self-conscious emotions are the bedfellows of compulsive skin picking (e.g., Keuthen et al, 2000; Wilhelm et al., 1998). For the majority of individuals with CSP, the scars and sores produced serve as sources of shame and anxiety for the individual who must carry them. Keuthen and colleagues (2001) found a positive relationship between compulsive skin picking severity and duration of daily picking, satisfaction during picking, and shame subsequent to picking, as well as depression and anxiety scores in a clinical sample of chronic skin pickers. Related to this, Simeon et al., (1997) found that shame, loneliness, and humiliation were common emotional experiences of the individuals in their sample who engaged in compulsive skin picking.

Avoidance of social interactions and self-concealment are reported consistently by individuals with compulsive skin picking (e.g., Keuthen et al., 2001). In a comparison study of injurious and non-injurious skin picking, Keuthen and fellow researchers found that those participants with self-injurious skin picking endorsed significantly greater avoidance, embarrassment, and social anxiety. In a study evaluating social avoidance behavior in chronic skin pickers, Arnold et al. (1998) found that 20 percent of participants reported being housebound, while almost half of participants noted significant social avoidance and withdrawal. A related study by O'Sullivan and colleagues (1999) found that over half of their study participants avoided social situations, with almost 90% reporting social embarrassment. In addition, research suggests that individuals with compulsive skin picking spend great amounts of effort and time in the process of concealing the damage they have done to their bodies (e.g., O'Sullivan et al., 1999). O'Sullivan and colleagues found that up to 84% of their study

participants used clothing or cosmetics to conceal the results of their skin picking, with over half of subjects reporting substantial dissatisfaction with physical appearance and obsessional fears that their picking would be perceived by others.

Summary

Shame plays a central role in the etiology and maintenance of different self-injurious behaviors, but critical differences exist between these behaviors. For instance, NSSI appears to occur initially as a result of shame about the self, but continues as an individual is increasingly ashamed of their self-injurious behaviors as well.

Neurochemical reinforcement, the desire to self-punish, secretiveness and shame are all factors that promote continuation of the behaviors (Yip, 2006). Shame further minimizes the likelihood that the sufferer will seek adequate support to stop the self-harming behavior, as well as to process and heal from experiences that initially contributed to the sufferer's shame (i.e., childhood abuse, relational trauma, etc.).

In contrast to NSSI, there is little evidence that individuals with TTM engage in hair pulling behaviors because of feelings of shame about themselves or as a way to self-punish. Instead, individuals appear to experience shame in response to their inability to stop the cycle of pulling as well as to the physical consequences of the hairpulling (i.e., bald spots, missing eyebrows, etc.). The hairpulling behaviors are maintained through avoidance of disclosure and help-seeking, as well as feelings of hopelessness after repeated attempts to stop pulling (Penzel, 2003). In addition, hairpulling can reinforce social isolation and negatively impact self care, grooming behaviors, and self-esteem (Casati et al., 2000).

Similarly, although shame does not appear to be an initial catalyst for the onset of self-injuring behaviors for the majority of individuals with CSP, it is a common consequence and maintainer of these behaviors. Research suggests that the majority of picking behaviors are not rooted in shame, but instead initiated unintentionally and continued to regulate difficult emotions, cognitions, or sensations by neurochemical means (Flessner and Woods, 2006; Keuthen et al., 2000). Clinical practice literature (e.g., Penzel, 2003) suggests that there is a subset of individuals with CSP who experience compulsive perfectionism and feelings of shame associated with having flaws, though there is little research on this specific subtype of skin pickers. These individuals perceive self-injurious skin-picking as an attempt to fix their skin, although the behaviors result in more damage, flaws, and shame about not being able to be perfect (Penzel). As with TTM, those who engage in CSP tend to avoid both medical and mental health assistance due to the shame surrounding their disorders (Hayes, Storch & Berlanga, 2009).

Shame-based interventions with modifications for the treatment of SIBs

In spite of a broad body of research and conceptual thought linking NSSI, TTM and CSP with shame, there has been a surprising lack of attention paid to the treatment of shame for individuals with SIBs. Although shame plays a significant role in all SIBs, clinicians must take into account a number of different factors to create appropriate and effective interventions for specific clients. Interventions should be tailored to target the type of shame (state vs. trait) as well as to account for the domain-specificity of the shame experienced (e.g., characterological, behavioral, bodily, etc.). Interventions targeting shame must also be appropriate for the individual's type of SIB (e.g., NSSI, TTM, CSP) and subtype of SIB (focused, automatic, etc.).

A growing body of evidence suggests that the therapeutic relationship is the most important element of successful psychotherapy outcomes (e.g., Horvath & Bedi, 2002). Kaufman (1993) suggests that the quality of the relationship may be particularly critical for shame-based clients, noting the vital nature of building a strong relationship of trust between therapist and client. Tangney and Dearing (2002) suggest that when a client is dominated by shame, negative self-evaluation and heightened sensitivity to disapproval from others can cause concealment of the severity of clinical issues. The client's expectation that behaviors or resulting distress will be met with disgust, disapproval or disdain can negatively impact the quality of the therapeutic relationship and the efficacy of the therapeutic work (Gilbert, Pehl, & Allan, 1994). Thus a central part of the healing process for clients with SIBs may be experiencing an empathic, genuinely interested interaction with a therapist, wherein behaviors can be described without fear of judgment, support and compassion can be received, and strategies learned to manage the behaviors.

Lewis notes that "it is critical that the therapist has an appreciation that engaging in therapy can evoke shame" (1971; pp. 15). Clinicians working with these clients must normalize client anxiety and fears of judgment during the initial phases of therapy. The process of an initial clinical interview is intrinsically exposing; the client is asked to provide information about patterns of thinking, feeling and behaving, personal history, as well as the behaviors, symptoms and distressing experiences that led the client to seek help. Clinicians must gather information about the behaviors enacted by the client in order to create an effective treatment plan, which can be particularly stressful for clients who experience shame around SIBs. This should include information such as triggers for the behavior, intensity of urges, frequency of behaviors, areas targeted and implements

used, severity of injury, and impairment across different settings (i.e., social, vocational, etc.). Clinicians can help to minimize client anxiety by exhibiting a high level of transparency as related to the purpose of these questions and how the information will be used to aid in the recovery process.

Therapists must be mindful of the shame their clients experience when conducting intakes in order to not overwhelm new clients; particularly around topics of self-injury, the body, and related behaviors. One strategy that may be particularly helpful during these initial phases of therapy is to balance the process of information-gathering with engaging in psychoeducation about SIBs. Shame and shame-related cognitions are commonly associated with SIBS, with clients reporting that they feel that they are alone in their struggles (Penzel, 2003). Clinicians who can cite research findings about the prevalence and characteristics of SIBs may help to reduce feelings of isolation and shame.

In addition, shame should also be assessed to determine the client's state and trait shame, as well as the specific domains where the shame is manifesting. Such nuances have significant implications for appropriate and effective treatment. For example, one individual who engages in CSP may do so in an automatic manner and feel shame as a result of the behaviors they engage in. Conversely, another person may be driven to pick their skin in an attempt to "fix their imperfection" as a result of internalized or characterological shame, and then additionally feel ashamed about their behavior or the physical repercussions of the picking. These two individuals both experience shame, but with different foci and in different domains, thus requiring different interventions.

It is also important for the client to understand the etiology of disordered behavior and the role that shame commonly plays in perpetuating the behaviors for a client's specific SIB. Individuals struggling with NSSI can benefit from therapeutic discussions of factors that predispose people to engaging in self-harm, such as childhood physical and sexual abuse and insecure attachment. Clients who can draw connections between past life circumstances and current maladaptive behavior patterns may experience a reduction of shame and self-blame. Similarly, exploring familial patterns of TTM and CSP and providing education on the potential genetic contribution to these behaviors can additionally assist in shame reduction. Providing psychoeducation to a client can result in a cognitive shift, transforming the behavior from "something that I do because I have no willpower" to "something that I do (and potentially that other members of my family do) because of a genetic predisposition to this form of body-focused coping."

Clients can benefit greatly from psychoeducation about the functions of SIBs, such as the self-regulating properties of the behaviors. Instead of perceiving the behaviors as purposeless and themselves as weak-willed or flawed, clients can shift their frame to the perspective that the behavior does fulfill some purpose (e.g., that there is neurochemical reinforcement for the behaviors; Yip, 2006). Reframing self injurious behavior as an attempt to self-regulate or modulate difficult emotions can help individuals see the behavior as a means of coping during difficult or stressful times. Emphasizing that the SIB is a learned set of behaviors also helps to separate the disorder from the self of the client, thus reducing characterological shame. Shame can be reduced and hope instilled through the implication that the behaviors can be replaced with healthier, less emotionally-costly, and more effective strategies. This cognitive shift

allows the client to then look for alternative, more personally acceptable ways to fulfill the functions of the SIB, such as exercising or taking medication, while simultaneously reducing shame.

Such psychoeducation need not be limited to the attributes and functions of SIBs. In addition, learning about shame, its etiology and aftereffects can be useful in this process. Lewis (1971) stated that in order to be healed, shame must be acknowledged and owned. Thus, a crucial step in interventions is “dismantling the defenses that (the client) has erected against recognizing their own shame” (Pattison, 2000; pp. 166), so that the client can “gain insight into their shame, and thus get rid of or dissipate it” (Lewis, 1992; p. 127).

A strategy that may be particularly helpful in raising a client’s awareness of shame is providing education on typical behavioral and postural manifestations of shame. Valliant (1997) suggests that the “unpleasant, sickening inner sensations associated with shame must be carefully detailed with each patient so that they can identify these feelings when they occur” (p.271). For example, explaining to a client that external cues (such as gaze aversion, dropping the chin or blushing) or internal indicators (feeling small or feeling a desire to withdraw) are often associated with shame can help her to gain an awareness of indicators that she is moving into a shame response. When the therapist and client have determined the client’s typical shame response indicators, they can both more effectively attend to shame as it occurs in and outside of therapy.

After these patterns are identified, therapists can work with clients to more effectively manage their shame responses in session. With an attuned eye to shame response indicators, the therapist can make gentle suggestions that the client may want to

make eye contact, to lift their chin, or to breathe and let their flushing response dissipate. Similarly, if the client shifts subjects away from conversations about their self-injuring, it can be helpful to gently refocus the session and express curiosity about the potentially shame-related divergence. It can be helpful for the therapist to maintain this attitude of genuineness and curiosity regarding the client's cognitive, behavioral, and emotional process when engaging in SIBs.

Respectfully asking clients to walk their therapist through the process of self-injury allows the clinician to gather valuable information about the antecedents and repercussions of the behaviors, builds rapport and acceptance in the therapeutic relationship, and reduces the client's shame around discussing the behaviors. Learning an emotional vocabulary to speak about one's internal experiences is essential in the recovery process (Macdonald, 1998). This is particularly critical for individuals who use their SIB as a means of expressing internal pain, conflict, or as a means of nonverbally asking for help. Morrison (1989) stated that the sharing of secrets and unspoken thoughts releases significant energy that was previously taken up by concealment and fear—energy that can be redirected toward healthy goals.

Finally, therapists can also offer to view the bodily damage resulting from the SIB. For self-injurers, this can include self-inflicted bruises, burned skin, incisions or scars. Individuals with TTM may show the therapist areas where hair has been pulled, while clients with CSP may reveal areas of skin that have been picked by fingers or other implements. When engaging in the process of exploring shame, the therapist must “recognize and interpret the client's shame without further activating shame and thus driving the client into further concealment and avoidance” (Broucek, 1991; p. 79).

Focusing on the shame experience too intensely or prematurely in the relationship may be similarly damaging, as can asking for the client to show the physical evidence of their behaviors before a relationship has been established. It is evident that a therapist working with SIBs must carefully balance the processing of shame and potentially shame-inducing behaviors.

Conclusions

This article provides a cursory exploration of the intersection of shame and SIBs, emphasizing the importance of assessing the type of shame, sources of shame, and shame severity when working with self-injuring clients. In addition, it highlights the importance of using a customized approach to treating the person in the context of the specific SIB and the shame with which they struggle. Therapists must work to educate clients on current research and thinking on the topics of nonsuicidal self-injury, trichotillomania and dermatillomania. This will help clients to build a conceptual understanding of the workings of SIBs in general as well as their own specific set of behaviors. Building an understanding will, in turn, reduce shame, instill hope, and build self-efficacy in the recovery process. This psychoeducational focus is best balanced by more active, collaborative therapeutic work toward personal understanding and behavioral change. Through these combined strategies the client can process and explore the etiology and maintenance of their disorder, as well as the social, emotional, and physical repercussions of these behaviors.

This article reviews current thinking on SIBs and shame. Although some initial thoughts were provided on ways that interventions for shame can be tailored for work with clients dealing with SIBs, these suggestions remain largely untested. Intervention

studies are needed to empirically evaluate the impact of shame reduction interventions in the context of SIBs. Future practice should encourage further development of interventions to modify multiple types of shame in clients who self-injure, and add to our collective understanding of how shame impacts and impedes the recovery process for individuals with SIBs.

References

- American Psychological Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: APA.
- Arnold, L. M., McElroy, S. L., Mutasim, D. F., Dwight, M. M., Lamerson, C. L., & Morris, E.M. (1998). Characteristics of 34 adults with psychogenic excoriation. *Journal of Clinical Psychiatry, 59*, 509–514.
- Bloch, M. R., Elliott, M., Thompson, H., & Koran, L. M. (2001). Fluoxetine in pathologic skin picking: Open-label and double-blind results [Electronic version]. *Psychosomatics, 42*, 4, 314-319.
- Bohne, A., Keuthen, N. J., Wilhelm, S., Deckersbach, T., & Jenike, M. A. (2002). Prevalence of symptoms of body dysmorphic disorder and its correlates: A cross cultural comparison. *Psychosomatics, 43*(6), 486-490.
- Briere, J., & Gil, E. (1998). Self-mutilation in clinical and general population samples: Prevalence, correlates, and functions. *American Journal of Orthopsychiatry, 68*, 609-620.
- Broucek, F.J. (1991). *Shame and the self*. New York: Guilford Press
- Brown, M., Comtois, K.A., Linehan, M.M. (2002). Reasons for suicide attempts and nonsuicidal self-injury in women with borderline personality disorder. *Journal of Abnormal Psychology, 111*, 198-202.
- Bohne, A., Wilhelm, S., Keuthen, N., Baer, L., & Jenike, M. (2002). Skin picking in German students: prevalence, phenomenology, and associated characteristics. *Behavior Modification, 26*, 320–339.

- Brown, M. Z., Linehan, M. M., Comtois, K., Murray, A., & Chapman, A. L. (2009). Shame as a prospective predictor of self-inflicted injury in borderline personality disorder: A multimodal analysis. *Behaviour Research and Therapy*, *47*(10), 815-822.
- Casati, J. , Toner, B. , & Yu, B. (2000). Psychosocial issues for women with trichotillomania. *Comprehensive Psychiatry*, *41*(5), 344.
- Christenson, G.A., Pyle, R. L., & Mitchell J. E. (1991). Estimated lifetime prevalence of trichotillomania in college students. *Journal of Clinical Psychiatry*, *52*, 415-417.
- Christenson, G.A., MacKenzie, T.B., & Mitchell, J.E. (1991). Characteristics of 60 adult chronic hair pullers. *American Journal of Psychiatry*, *148*, 365-370
- Christenson, G.A, Ristvedt, S.L., Mackenzie, T.B. (1993). Identification of trichotillomania cue profiles. *Behaviour Research and Therapy*, *31*, 315-320.
- Duke, D., Keeley, M., Geffken, G., & Storch, E. (2010). Trichotillomania: A current review. *Clinical Psychology Review*, *30*(2), 181-193.
- Derouin, A., & Bravender, T. (2004). Living on the edge: The current phenomenon of self mutilation in adolescents. *American Journal of Maternal Child Nursing*, *29*(1), 12-18.
- Diefenbach, G. J., Mouton-Odum, S, & Stanley, M. A. (2002). Affective correlates of trichotillomania. *Behaviour Research and Therapy*, *40*, 1305-1315.
- du Toit P.L., van Kradenburg, J., Niehaus, D.H., Stein, D.J. (2001). Characteristics and phenomenology of hairpulling: An exploration of subtypes. *Comprehensive Psychiatry*, *42*, 247-256.

- Flessner, C. A. & Woods, D. W. (2006). Phenomenological characteristics, social problems, and the economic impact associated with chronic skin picking. *Behavior Modification, 30*, 944-963. doi:10.1177/0145445506294083
- Gilbert, P., Pehl, J., & Allan, S. (1994). The phenomenology of shame and guilt: An empirical investigation. *Journal of Medical Psychology, 67*, 23-26.
- Gilbert, P. (1998). What is shame? Some core issues and controversies. In P. Gilbert & B. Andrews, (Eds), *Shame: Interpersonal behavior, psychopathology, and culture, Series in affective science* (pp. 3-38). New York, NY, US: Oxford University Press.
- Goldberg, C. (1991). *Understanding shame*. Northvale, NJ: Jason Aronson.
- Gratz, K. L. (2001). Measurement of deliberate self-harm: Preliminary data on the Deliberate Self-Harm Inventory. *Journal of Psychopathology and Behavioral Assessment, 23*, 253-263.
- Gratz, K. L., Conrad, S. D., & Roemer, L. (2002). Risk factors for deliberate self-harm among college students. *American Journal of Orthopsychiatry, 72*, 128-140.
- Griesemer, R. D. (1978). Emotionally triggered disease in a dermatological practice. *Psychiatric Annals, 8*, 49-56.
- Haidt, J. (2003). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences*. Oxford : Oxford University Press.(pp. 852-870).
- Haw, C., Houston, K. Townsend, E. & Hawton, K.(2001). Deliberate self-harm patients with alcohol disorders: Characteristics, treatment and outcome. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 22*, 3, 93-101

- Hayes, S. L., Storch, E. A., & Berlanga, L. (2009). Skin Picking Behaviors: An Examination of the Prevalence and Severity in a Community Sample. *Journal of Anxiety Disorders, 23*, 314-319.
- Herpetz, S. (1995). Self-Injurious behavior: Psychopathological and nosological characteristics of subtypes of self-injurers. *Acta Psychiatrica Scandinavica, 91*, 57-68.
- Hicks, K. M. & Hinck, S. M. (2008), Concept analysis of self-mutilation. *Journal of Advanced Nursing, 64*, 408-413.
- Harder, D. W. (1995). Shame and guilt assessment, and relationships of shame- and guilt proneness to psychopathology. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride*. (pp. 368-392). New York: Guilford.
- Horvath, A. O., & Bedi, R. P. (2002). The alliance. In J. C. Norcross (Ed.), *Psychotherapy relationships that work: Therapist contributions and responsiveness to patients*. (pp. 37-69). New York: Oxford University Press.
- Kaufmann, J. (1993). *The psychology of shame: Theory and treatment of shame-based syndromes* (1st ed.). New York: Springer.
- Keuthen, N., Deckersbach, T., Wilhelm, S., Hale, E., Fraim, C., Baer, L., O'Sullivan, R. L., & Jenike, M.A. (2000). Repetitive skin-picking in a student population and comparison with a sample of self-injurious skin-pickers. *Psychosomatics, 41*(3), 210-215.
- Keuthen, N. J., Bohne, A., Himle, M., & Woods, D. W. (2005). Advances in the Conceptualization and Treatment of Body-Focused Repetitive Behaviors. In B. E.

- Ling & B. Ling (Eds.), *Obsessive compulsive disorder research* (pp. 1-29). Hauppauge, NY: Nova Biomedical Books.
- Keuthen, N. , Stein, D. , & Christenson, G. (2001). *Help for hair pullers: Understanding and coping with trichotillomania*. Oakland, CA: New Harbinger.
- Keuthen, N. J., Deckersbach, T., Wilhelm, S., Engelhard, I., Forker, A., O'Sullivan, R. L., & Baer, L. (2001). The Skin Picking Impact Scale (SPIS): Scale development and psychometric analyses. *Psychosomatics: Journal of Consultation Liaison Psychiatry*, 42(5), 397-403.
- Klonsky, E.D., Oltmanns, T.F., & Turkheimer, E. (2003). Deliberate self harm in a nonclinical population: Prevalence and psychological correlates. *American Journal of Psychiatry*, 160, 1501-1508.
- Lewis, H.B. (1971). *Shame and guilt in neurosis*. New York, NY: International University Press.
- Lewis, H. B. (1987). *The role of shame in symptom formation*. Hillsdale, NJ: Lawrence Erlbaum.
- Lewis, M. (1992) *Shame: The Exposed Self*. NY: The Free Press.
- Lewis, M. (2000). Self-conscious emotions: Embarrassment, pride, shame, and guilt. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 623-636). New York: Guilford.
- Lochner, C., Simeon, D., Niehaus, D.J.H., Stein, D.J. (2002). Trichotillomania and skin picking: A phenomenological comparison. *Depression and Anxiety*, 15, 83-96.
- Macdonald, S. (1998). Disclosing Shame. In P. Gilbert and B. Andrews (Eds.) *Shame*. (pp. 141-157). Oxford: Oxford University Press.

- Martens, W. H. J. (2005). A multicomponential model of shame. *Journal for the Theory of Social Behavior, 35*, 399-411.
- Miller, S. (1996). *Shame in context*. New York, NY: Routledge.
- Morrison, A.P. (1989). *Shame: The underside of narcissism*. New Jersey: Analytic Press.
- Muehlenkamp, J. , Kerr, P. , Bradley, A. , & Larsen, M. (2010). Abuse subtypes and nonsuicidal self-injury preliminary evidence of complex emotion regulation patterns. *Journal of Nervous and Mental Disease, 198*(4), 258-263.
- Norberg, M. , Wetterneck, C. , Woods, D. , & Conelea, C. (2007). Experiential avoidance as a mediator of relationships between cognitions and hair-pulling severity. *Behavior Modification, 31*(4), 367-381. doi:10.1177/0145445506297343
- Nussbaum, M.C. (2004). *Hiding from Humanity: Shame, Disgust, and the Law*. Princeton, NJ: Princeton University Press.
- Odlaug, B., & Grant, J.E. (2008). Clinical characteristics and medical complications of pathologic skin picking, *General Hospital Psychiatry, 30*, 61–66.
doi:10.1016/j.genhosppsy.2007.07.009
- O'Sullivan, R. , Keuthen, N. , Jenike, M. , & Gumley, G. (1996). Trichotillomania and carpal tunnel syndrome. *Journal of Clinical Psychiatry, 57*(4), 174.
- O'Sullivan, R. , Keuthen, N. , Christenson, G. , Mansueto, C. , Stein, D. , et al. (1997). Trichotillomania: Behavioral symptom or clinical syndrome? *American Journal of Psychiatry, 154*(10), 1442.
- Parker, S. & Thomas, R. (2009). Psychological Differences in Shame vs. Guilt: Implications for Mental Health Counselors. *Journal of Mental Health Counseling, 31*(3), 213-224.

- Pattison, S. (2000). *Shame: Theory, therapy, theology*. Cambridge, University Press.
- Penzel, F. (2003). *The Hairpulling Problem: A Complete Guide to Trichotillomania*. New York, Oxford.
- Ranganathan, A. R., & Todorov, N. (2010). Personality and self-forgiveness: The roles of shame, guilt, empathy and conciliatory behavior. *Journal of Social and Clinical Psychology, 29*(1), 1-22. doi: 10.1521/jscp.2010.29.1.1
- Rivzi, S.L. (2009). Development and Preliminary Validation of a New Measure to Assess Shame: The Shame Inventory. *Journal of Psychopathology and Behavior Assessment, 32*, 438-447.
- Roseman, I. J. (1984). Cognitive determinants of emotions: A structural theory. In P. Shaver (Ed.), *Review of Personality and Social Psychology* (Vol. 5, pp. 11-36). Beverly Hills, CA: Sage.
- Sacks, M.B., Flood, A.M., Dennis, M.F., Hertzberg, M.A., Beckham, J.C. (2008). Self mutilative behaviors in male veterans with Posttraumatic Stress Disorder. *Journal of Psychiatric Research, 42*(6), 487-94, doi:10.1016/j.jpsychires.2007.05.001.
- Van Sell, S., O'Quin, L., Oliphant, E., Shull, P., Austin, K., Johnston, E., & Nguyen, C. (2005). Help stop self-injury. *RN, 68*(11), 55-59.
- Silverman, M.M., Berman, A.L., Sanddal, N.D., O'Carroll, P.W., Joiner, T.E. (2007). Rebuilding the Tower of Babel: A revised nomenclature for the study of suicide and suicidal behaviors part 2: Suicide-related ideations, communications, and behaviors. *Suicide and Life-Threatening Behavior, 3*, 264-277.
- Simeon, D., & Favazza, A.R. (2001). Self-injurious behaviors: Phenomenology and assessment. In D. Simeon & E. Hollander (Eds), *Self-injurious behaviors:*

- Assessment and treatment* (pp. 1-28). Washington, DC: American Psychological Association.
- Simeon, D, Stein, D.J., Gross, S., Islam, N., Schmeidler, J., Hollander, E.. (1997). A double-blind trial of fluoxetine in pathologic skin picking. *Journal of Clinical Psychiatry, 58*(8), 341-7.
- Soriano, J. , O'Sullivan, R. , Baer, L. , Phillips, K. , McNally, R. , et al. (1996). Trichotillomania and self-esteem: A survey of 62 female hair pullers. *Journal of Clinical Psychiatry, 57*(2), 77.
- Stanley, M.A., Borden, J.W., Bell, G.E., & Wagner, A.L. (1994). Nonclinical hair pulling: Phenomenology and related psychopathology. *Journal of Anxiety Disorders, 8*, 119-130.
- Starr, D. (2004). Understanding those who self-mutilate. *Journal of Psychosocial Nursing and Mental Health Services, 42*, 32–40.
- Stein, D. J., Grant, J. E., Franklin, M. E., Keuthen, N., Lochner, C., Singer, H. S., & Woods, D. W. (2010). Trichotillomania (hair pulling disorder), skin picking disorder, and stereotypic movement disorder: Toward DSM-V. *Depression and Anxiety, 27*(6), 611-626.
- Stemberger, R. , Thomas, A. , Mansueto, C. , & Carter, J. (2000). Personal toll of trichotillomania: Behavioral and interpersonal sequelae. *Journal of Anxiety Disorders, 4*(1), 97-104.
- Swannell, S., Martin, G., Scott, J., Gibbons, M., & Gifford, S. (2008). Motivations for self injury in an adolescent inpatient population: Development of a self-report measure. *Australasian Psychiatry, 16*(2), 98-103.

- Tangney, J. P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology, 101*, 469-478.
- Tangney, J. P. (1996). Conceptual and methodological issues in the assessment of shame and guilt. *Behaviour Therapy and Research, 34*, 741-754.
- Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*, 1256-1269.
- Tangney, J. P. (2001). Constructive and destructive aspects of shame and guilt. In A. C. Bohart & D. J. Stipek.(Eds). *Constructive & destructive behavior: Implications for family, school, & society* (pp. 127-145). Washington, DC: American Psychological Association.
- Tangney, J. P., & Dearing, R. L. (2002). *Shame and Guilt*. New York: Guilford Press.
- Tracy, J., Robins, R., & Tangney, J. (Eds.) (2007). *The self-conscious emotions: Theory and research*. New York: Guilford Press.
- Teng, E. J., Woods, D.W., Twohig, M. P., & Marcks, B.A. (2002). Bodyfocused repetitive behavior problems: Prevalence in a nonreferred population and differences in perceived somatic activity. *Behavior Modification, 26*, 340-360.
- Thomas, H.E., (1999). *The shame response to rejection*. New York: Albano Books.
- Valliant, L.M. (1997). *Changing character: Short-term anxiety-regulating psychotherapy for restructuring defenses, affects, and attachment*. New York, NY: BasicBooks.
- Whitlock, J.L., Eckenrode, J.E. & Silverman, D. (2006). The epidemiology of self injurious behavior in a college population. *Pediatrics, 117*(6), 1939-1948.

- Wilhelm, S., Keuthen, N. J., Deckersbach, T., Engelhard, I. M., Forker, A. E., Baer, L., O'Sullivan, R. L., & Jenike, M. A. (1999). Self-injurious skin picking: Clinical characteristics and comorbidity. *Journal of Clinical Psychiatry, 60*(7), 454-459.
- Woldorf, G. (2005) Clinical implications of the paradox of deliberate self-injury. *Journal Specialist Pediatric Nursing, 10*, 196–200.
- Woods, D. W., Fuqua, R. W., & Outman, R. C. (1999). Evaluating the social acceptability of individuals with habit disorders: The effects of frequency, topography and gender manipulation. *Journal of Psychopathology and Behavioral Assessment, 21*, 1-18.
- Yip, K. (2006). A strength's perspective in working with an adolescent with self cutting behaviours. *Child and Adolescent Social Work Journal, 23*, 134-146.
- Zanarini, M.C., Frankenburg, F.R., Hennen, J., Silk, K.R. (2003). The longitudinal course of borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. *American Journal of Psychiatry, 160*, 274–283. doi:10.1176/appi.ajp.161.11.2108
- Zlotnik, C., Mattia, J. L., & Zimmerman, M. (2001). The relationship between posttraumatic stress disorder, childhood trauma, and alexithymia in an outpatient sample. *Journal of Traumatic Stress, 14*, 177–187.

CHAPTER 2

THE RELATIONSHIPS AMONG MULTIDIMENSIONAL PERFECTIONISM, SHAME AND TRICHOTILLOMANIA SYMPTOM SEVERITY

Introduction

A growing body of research suggests that “rates of Trichotillomania are approaching, matching, or even exceeding those of more commonly researched disorders” (Woods, 2011; p. 747). More common than previously thought, TTM prevalence estimates range from 0.6% to 3.4% of the population, with 70-93% of these cases being women (Christenson, Pyle, & Mitchell, 1991; Rothbaum, Shaw, Morris, & Ninan, 1993; Duke, Bodzin, Tavares, Geffken, & Storch, 2009). In addition, several researchers have found behavioral patterns consistent with some aspects of TTM occurring at rates of 1.0% to 13.3% in college students (Duke, Keeley, Ricketts, Geffken, & Storch, 2009; Graber & Arndt, 1993; Rothbaum, Shaw, Morris, & Ninan, 1993; Woods & Miltenberger, 1996). These studies suggest a conceptualization of TTM that ranges from occasional, benign hairpulling to more severe, compulsive hairpulling which results in significant impairment and distress (Loughran et al., 2011).

Often, TTM is comorbid with other mental health issues, which can further exacerbate impairment. Frequently co-occurring disorders include anxiety and depression (Duke et al., 2009), as well as substance abuse and eating disorders, (Mackenzie & Mitchell, 1991; Norberg, Wetterneck, Woods, & Conelea, 2007), cluster b & c personality disorders (Christenson, Chernoff-Clementz, & Clementz, 1992), attachment difficulties (Schut et al., 1997), and TTM-related social avoidance (Mansueto, 1990). In

addition, there is a growing body of research that suggests a significant relationship between Obsessive Compulsive Disorder (OCD) and TTM (Christenson & Mackenzie, 1995; Duke, Keeley, Geffken, & Storch, 2010).

The strength of the connections between TTM and OCD has led TTM to be conceptualized as an OC spectrum disorder, “characterized as repetitive, intentional performance of behavior, which sufferers perceive as difficult to resist in spite of knowledge of potential adverse consequences... often related to negative affective states”(Bohne, Keuthen, Tuschen-Caffier, & Wilhelm, 2005; p. 935). Research suggests a high comorbidity between TTM and OCD symptomatology. For example, Stewart, Jenike, & Keuthen (2005) found that 18.8% of patients in an inpatient sample of individuals treated for OCD reported low rates of hairpulling, 15.6% reported moderate to severe hairpulling, and 7.8% reported severe hairpulling. Similarly, Hajcak, Franklin, Simons, and Keuthen (2006) found positive relationships between anxiety, stress reactivity, hair-pulling, skin-picking and OC symptoms (obsessing and checking) in a nonclinical, college student sample. In addition, researchers hypothesize that TTM urges are activated by affectively-valenced external cues (setting and tools or implements for pulling) and internal cues, including emotional triggers (anxiety, tension, boredom, anger, loneliness, guilt, indecision, and excitement), sensations (visual, tactile, and physical), and cognitions (e.g., perceived symmetry)(Mansueto, Golomb, Thomas, & Stemberger, 1997). These authors suggest that these cues may be particularly salient for individuals with comorbid OCD or depression which are often related to a “tendency toward perfectionism” (Mansueto, et al.; p.571).

Perfectionism and Trichotillomania

A number of self-help materials, workbooks for the management of TTM, and popular press books written by researchers and therapists treating TTM note the connection between TTM and perfectionism (e.g., Keuthen, Stein, & Christianson, 2001; Penzel, 2003). Though there is a significant body of research on OCD and perfectionism, only one published, conceptual article to date has explored the relationship between perfectionism and TTM symptomatology (Pelissier & O'Connor, 2004). This article presented a case study of a young woman with TTM, with interventions focusing on shifting perfectionistic beliefs and perfectionistic style of action. The outcome of this case study suggests that perfectionism is a promising clinical target for the treatment of TTM. To this researcher's knowledge, there are no other empirical qualitative or quantitative articles to date looking at this relationship.

Trichotillomania and Shame

Research suggests that TTM can be ravaging to the self, with common reports of low self-esteem (Soriano et al., 1996), irritability, depression, feelings of unattractiveness (Stemberger, Thomas, Mansueto, & Carter, 2000), fear of negative evaluation (Gluhoski, 1995), shame (Winchel et al., 1997) and shame-related cognitions relating to discrepancies between the real and ideal self and behaviors (Penzel, 2003). Miller (1996) argues that shame is a motivator of perfectionism in Obsessive–Compulsive Disorder. Bohne et al. (2005) suggest that shame resulting from TTM behaviors results in social isolation, fear of help-seeking due to social rejection (including avoidance of doctor's appointments), and severe self-deprecation due to “not being able to control the pathologic behavior and its physical consequences (p. 229).” Stemberger, et al. (2000) completed chart reviews and patient interviews with 45 individuals with TTM. Eighty

percent of the patients reported feeling depressed and unattractive, 70% reported low self-esteem, and 22-67% reported avoidance of various social activities, with percentages dependent on specific activities surveyed. They found a significant relationship between shame and depressed mood and feelings of unattractiveness. This study suggests that TTM results in “marked day-to-day distress, social impairments, depressed mood” as well as “shame, and low-self-esteem,... with significant interrelations between negative affect and self-perceptions” (p.102). The authors corroborate the suggestion of Mansueto et al. (1997) that “depression and shame serve as cues for pulling” (p.102) but were unable to evaluate TTM symptom severity in this relationship.

In an additional study, Norberg et al. (2007) evaluated the relationships between pulling severity, dysfunctional beliefs about appearance, fear of negative evaluation and feelings of shame, and found positive relationships between all variables and pulling severity. The authors also found that experiential avoidance fully mediated the relationship between fears of negative evaluation and hair-pulling severity and feelings of shame and hairpulling. This study lends additional support to the idea that hair-pulling severity is positively correlated with feelings of shame.

Perfectionism and Shame

Recent research suggests that perfectionism can be conceptualized as a multidimensional construct with both positive and negative aspects, which are related to positive and negative outcomes, respectively (e.g., Ashby & Rice, 2007). Consistent with this, a number of studies have found relationships between shame and adaptive or maladaptive forms of perfectionism (e.g., Ashby, Rice, & Martin, 2006). Tangney (2002) states that perfectionists are “strict self-evaluators who broaden the range of

outcomes that would be perceived as a failure,” and suggests that “failure leads perfectionists to feelings of shame” (p. 201). Tangney suggests that when an unhealthy or maladaptive perfectionist fails in an endeavor, he or she interprets this as a failure of the person himself (resulting in shame), as opposed to a short-coming of performance. Socially prescribed perfectionism, a maladaptive form of perfectionism wherein an individual believes that others have perfectionistic expectations and motives for the individual, has been found to be significantly and positively correlated with shame (Lutwak & Ferrari, 1996; Wyatt & Gilbert, 1998). Similarly, Ashby, Rice, & Martin (2006) evaluated the relationship between depression, maladaptive perfectionism, and shame, and found that maladaptive perfectionism was related to higher levels of shame that appeared to make individuals vulnerable to depression.

A number of studies suggest differential relationships between adaptive and maladaptive perfectionism and shame. For example, Fedawa, Burns, and Gomez (2005) found that a negative form of perfectionism was positively correlated with state-shame, state-guilt, and shame-proneness, whereas a positive form of perfectionism was found to be positively correlated with pride and negatively correlated with state shame and anxiety. Stoeber, Harris, and Moon (2007) found that healthy perfectionists reported more state pride and less state shame and guilt than unhealthy perfectionists and non-perfectionists. Moreover, healthy perfectionists indicated lower proneness to shame than unhealthy perfectionists and non-perfectionists. Additionally, Stoeber, Kemp, and Keogh (2008) evaluated the relationship between four facets of multidimensional perfectionism (perfectionistic striving, importance of being perfect, others’ high standards, conditional acceptance) and pride, shame, and guilt following experimental manipulation of success

and failure. Results of the study showed that perfectionistic striving was associated with more pride following success, whereas all facets were associated with more shame and guilt following failure, particularly conditional acceptance.

The Current Study

Although there are few studies to date focusing specifically on TTM and perfectionism, there is a substantial amount of evidence supporting the link between OCD and related OC spectrum disorders and perfectionism. A number of studies suggest that TTM behaviors occur commonly in both community and clinical populations, with symptoms ranging from innocuous to severe (Lochner et al., 2011). In addition, a number of studies have found significant, positive relationships between TTM symptom severity and shame. Shame has gained mounting support as a central construct in the study of multidimensional perfectionism and more specifically, maladaptive perfectionism. In spite of these connections, no studies to date have evaluated the relationship between perfectionism, shame, and TTM symptom severity. The current study evaluated the relationships among multidimensional perfectionism, shame, and trichotillomania symptom severity in both a clinical sample and a college student sample.

It was hypothesized that perfectionism would be related to symptom severity, and that shame would also be related to symptom severity. Further, it was hypothesized that some dimensions of shame (characterological shame, behavioral shame, and bodily shame) would mediate and/or moderate the relationship between perfectionism and TTM symptom severity. In addition, it was predicted that the relationships among multidimensional perfectionism, shame and trichotillomania symptom severity would be similar in nonclinical and clinical samples.

Method

Participants

Participants consisted of a clinical sample of individuals meeting criterion A for trichotillomania and a sample of undergraduate students attending a large urban university in the Southeastern United States. Demographics data were collected for all participants. Power analyses suggested that data was needed from a minimum of 77 individuals with TTM and 200 individuals from a college student sample to ensure adequate power, assuming Power = .80, a moderate effect size of $f^2 = .15$, and an alpha of .05, with additional participants desired to allow for additional analysis. These participant goals were exceeded in both groups, with $n=114$ participants with TTM and $n=287$ college student participants, which permitted additional analyses.

Participants in the clinical sample ($n=114$) were recruited through a combination of social networking sites, online message boards and forums, support groups for OC spectrum disorders, and at a national conference for individuals with Trichotillomania. Participants were included in the clinical sample if they met Criteria A for TTM on a screening instrument (See Appendix C). Of the 114 clinical participants, 4.8% identified as male and 95.2% identified as female. Their ages ranged from 18 to 65 with a mean age of 30.53. Eighty-eight percent of participants self-identified as Caucasian, 4.8% as Multi-racial, 2.4% as Asian American, 2.4% as African American, 1.6% as Latino, .8% as Native American, and 0% declined to answer. Over 73% percent reported that they have been in counseling, and 58% of participants reported that they had taken psychotropic medication at some point. Clinical participants responded on a voluntary

basis to list-serv postings, social media forum postings, and in person at a research study table with 2 secure laptops at the Trichotillomania Learning Center Conference.

Student participants in the study (n=287) were recruited from online classes in the department of Counseling and Psychological Services and awarded extra-credit for their participation. Of the 287 students, 34% identified as male, and 66% identified as female. Their ages ranged from 18 to 66 with a mean age of 24.69. Twenty-five percent of participants self-identified as Caucasian, 5.3% as Multi-racial, 5.6 % as Asian American, 50.8% as African American, 12.8% as Latino, 0% as Native American, and 0% declined to answer. Seventy-seven percent reported that they have never been in counseling, with 23% stating that they have participated in counseling. Only 6% of these participants reported that they had ever taken psychotropic medication. Undergraduate students participating in online classes in the department of Counseling and Psychological Services were invited to participate in a study entitled “Perfectionism and Body-focused coping.”

Procedure

All participants completed an online assessment that included demographics, a screening tool composed of the DSM-IV criteria for trichotillomania (See Appendix C) and general information about hairpulling behaviors, psychotropic medication history (See Appendix D), the Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001) (See Appendix G), the Massachusetts General Hairpulling Scale (MGH-HPS; Keuthen et al., 1995)(See Appendix F), and the Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002) (See Appendix E).

Student participants received an email from their respective course instructor offering an extra credit opportunity. Included in the email was a general description of the study (see Appendix A), as well as a web link to the online study (i.e., Speed Survey) so that they could complete the survey if they were interested in participating. If students decided to participate in the study, they clicked the link to the online study that was embedded in the email, which immediately took them to a page asking students to give voluntary consent (i.e., informed consent – See Appendix B) prior to participating in the study. Consent was indicated by a student typing “I agree” in the text box at the bottom of the informed consent page. After being directed to print a copy of the informed consent page for their own records, participants were directed to complete the online survey. Upon completion of the survey, students received a unique confirmation number that they then forwarded to their instructor to receive credit. No participant names were collected, therefore maintaining the confidentiality of the participant.

Clinical participants were invited to participate in a study titled “Perfectionism and Body-focused coping.” Clinical participants utilized a secure computer at the TLC conference or responded to a posting which consisted general description of the study (see Appendix A), as well as a web link to the online study (i.e., Speed Survey) so that they could complete the survey if they were interested in participating, or forward the posting on to peers or friends with TTM. Similar to the student participants, the clinical participants voluntarily clicked the link to the online study that was embedded in the email, which immediately took them to a page that asked them to give voluntary consent (i.e., informed consent – See Appendix B) prior to participating in the study. Consent was indicated by the participant typing “I agree” in the text box at the bottom of the

informed consent page. After printing a copy of the informed consent page for their own records, participants were directed to complete the online survey. No identifying participant data was collected for either sample, thus upholding confidentiality. Three individuals completing the study did not meet Criteria A for TTM (See Appendix A) and their data was excluded from the study.

Measures

Almost Perfect Scale – Revised. The Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001) is a 19-item inventory designed to measure both adaptive and maladaptive dimensions of perfectionism. For the purposes of this study the Standards and Discrepancy Subscales were utilized, as these subscales can be used to differentiate between adaptive and maladaptive perfectionism (Slaney et al., 2001). The Standards subscale was designed to measure the standards a person sets across a variety of domains. The Discrepancy subscale was designed to measure the negative reaction experienced when there is a discrepancy between standards and performance. Both adaptive and maladaptive perfectionists possess high standards, but only maladaptive perfectionists possess high levels of discrepancy.

Slaney et al. (2001) reported Cronbach's alphas of .85 for the Standards subscale, .92 for the Discrepancy subscale, and .68 for the Order subscale. For the purposes of this study a dimensional approach was taken, utilizing only the Discrepancy and Standards subscales. Cronbach coefficient alphas for the scales in this study were .84 for the Standards scores and .93 for the Discrepancy scores for the clinical sample and .79 for the Standards scores and .91 for the Discrepancy scores for the student sample.

Massachusetts General Hospital Hairpulling Scale. The Massachusetts General Hospital Hairpulling Scale (MGH-HPS; Keuthen et al., 1995) is a self-report instrument that assesses trichotillomania symptom severity. The MGH-HPS does this through the measurement of the frequency, intensity, and control of a participant's hair-pulling urges; the frequency, resistance, and perceived control over hair-pulling behaviors; and the participant's distress associated with hair pulling. Participants rate each of the 7-items on a 5-point Likert scale, ranging from 0 to 4. The scale yields a summative total score with higher scores indicating more severe symptoms. The MGH-HPS has demonstrated strong test-retest reliability ($r = .97$) and strong internal consistency (Cronbach's alpha = .89; Keuthen et al., 1995; O'Sullivan et al., 1995). In addition, O'Sullivan (1995) found evidence that the scale can be utilized to accurately assess changes in hair pulling. Cronbach coefficient alphas for the scale in this study was .85 for the clinical sample and .85 for the student sample.

Experience of Shame Scale. The Experience of Shame Scale (ESS; Andrews et al., 2002) is a 25-item questionnaire that assesses shame on experiential, cognitive and behavioral levels. The ESS yields a total score as well as 3 subscale scores: characterological shame, behavioral shame, and bodily shame. Participants respond according to how they have felt in the past year and each item is rated on a 4-point scale, ranging from 1—not at all to 4—very much, yielding total scores in the range 25–100. The total scale exhibits high internal consistency (Cronbach's alpha = .92), and test–retest reliability. The internal consistencies for the characterological, behavioral, and bodily subscales were .90, .87, and .86 (Cronbach's alpha), and the test–retest reliabilities were $r(90-93) = .78, .74, \text{ and } .82$, respectively, over 11 weeks (Andrews et al.). For the clinical

sample in this study, the internal consistencies for the characterological, behavioral, and bodily subscales were .90, .92, and .76, respectively. For the student sample in this study, the internal consistencies for the characterological, behavioral, and bodily subscales were .93, .92, and .83.

Data Analysis

Data were exported directly from the online Speed Survey database into SPSS to manage the data set. The analytic strategy was comprised of three steps. In the first step, bivariate correlations between the variables were calculated. Second, MANOVAs were conducted to evaluate mean differences between clinical and student groups on all measures. Third, tests were conducted to assess mediation using the Preacher and Hayes (2004, 2008) bootstrapping approach in order to investigate the possible relationship between perfectionism, shame, and TTM symptom severity. Finally, moderation analyses were conducted. Tests for clinical and student samples were conducted for each group independently.

Tests of Mediation

In order to test the hypothesis that multidimensional shame (defined as characterological, behavioral and bodily shame) mediates the relationship between maladaptive and adaptive perfectionism and TTM symptom severity, the Preacher and Hayes (2008) multiple mediation bootstrapping approach was used. Adaptive and Maladaptive perfectionism variables were computed by controlling for either perfectionistic standards (in the case of Maladaptive perfectionism) or perfectionistic discrepancy (in the case of Adaptive perfectionism). This bootstrapping approach is an extension of the Sobel Test (Baron & Kenny; Sobel, 1982) which compares the indirect

effect of an independent variable on a dependent variable to the null hypothesis that it equals zero. Bootstrapping is a non-parametric approach taking a large number of samples of the original sample size from the data. This approach examines the effect of each individual mediator while controlling for the others in addition to the combined indirect effect of all mediators. In contrast to other frequently used tests of mediation (e.g., Baron & Kenny; Sobel), the multiple mediation bootstrapping approach does not rely on the assumption that the results are normally distributed (see Preacher & Hayes, 2004 for a discussion).

In this particular study, the indirect effect (ab) is the product of the effect of the independent variable (adaptive perfectionism or maladaptive perfectionism) on the mediators (characterological shame, behavioral shame, and bodily shame; i.e., the a path) and the effect of the mediators on the dependent variable (TTM symptom severity as measured by the MGHS, i.e., the b path). Using the bootstrapping technique, five thousand random samples of the original sample were taken from the data, replacing each value as it was sampled; the indirect effect (ab path) was computed in each sample. The point estimate of the indirect effect is the mean ab path value computed over the samples. Next, a 95% confidence interval is calculated. If the upper and lower bounds of these bias-corrected and accelerated (BCa) confidence intervals do not contain zero, the indirect effect is significant. Effect sizes were presented as R^2 and designated as small (.02), medium (.15), or large (.35) respectively (Cohen, 1988, 1992).

Tests of Moderation

According to Baron and Kenny (1986), to test linear moderation between continuous variables, the product of the moderator and the independent variable is added

to the regression equation. Moderator effects are indicated by a significant effect of this interaction variable when the effect of the independent variable and the moderator are controlled. To test whether shame served as a moderating variable, separate hierarchical regression analyses were conducted for both samples in which the main effects for the predictors (adaptive and maladaptive perfectionism) and hypothesized moderating variable (shame) were entered into the initial block. The interaction terms were created (adaptive perfectionism x shame or maladaptive perfectionism x shame) were entered in the second block of the regression model to determine whether the interaction accounted for significant variation in the outcome variable (MGHSTOTAL).

Results

For the clinical sample, means, standard deviations, and correlations between APS-R subscales, ESS subscales, and the MGHS total score, as well as Cronbach's coefficient alphas for all scales appear in Table 1. For the student sample, means, standard deviations, and correlations between APS-R subscales, ESS subscales, and the MGHS total score, as well as Cronbach's coefficient alphas for all scales appear in Table 2. For the clinical group, the Standards dimension of the APS-R showed significant positive correlations with Discrepancy and with Behavioral Shame. The Discrepancy dimension of the APS-R showed significant positive correlations with Standards and all 3 of the shame subscales (characterological, behavioral, and bodily). For the student group, the Standards dimension of the APS-R showed significant positive correlations with Discrepancy and significant inverse correlations with TTM symptom severity, Characterological Shame and Bodily Shame. The Discrepancy dimension of the APS-R

showed significant positive correlations with Standards and all 3 of the shame subscales (characterological, behavioral, and bodily).

Tests of mean, between groups differences are shown in Table 3. Univariate tests were conducted to evaluate whether differences in the 3 shame subscales, perfectionistic standards and discrepancy, and TTM symptom severity as measured by the MGHS existed between the clinical and student groups. The results of univariate tests revealed statistically significant differences between clinical and student groups on the MGHS, $F(1, 399) = 1.88E3, p < .001$, as well as on each of the 3 subscales of the ESS; Characterological Shame, $F(1, 399) = 202.7, p < .001$, Behavioral Shame, $F(1, 399) = 100.540, p < .001$, and Bodily Shame, $F(1, 399) = 141.243, p < .001$. A significant difference was also found on the Discrepancy dimension of the APS-R, $F(1, 399) = 60.042, p < .001$, but no between groups difference was found on the Standards dimension $F(1, 399) = .455, p = .502$.

Table 1. Means, Standard Deviations, and Intercorrelations for All Study Variables for Clinical Sample

Variables	Mean	SD	1	2	3	4	5	6
1APSSStandards	39.75	7.88	--	--	--	--	--	--
2APSDiscrepancy	58.55***	16.41	.539**	--	--	--	--	--
3CharacterShame	35.01***	8.76	.081	.413***	--	--	--	--
4BehavioralShame	27.50***	7.28	.357**	.531***	.597***	--	--	--
5Bodily Shame	12.72***	3.01	.092	.379***	.564***	.417**	--	--
6TTM Severity	16.66***	5.81	-.08	-.087	.174	.253*	.103	--

**p<.01

***p<.001

Table 2. Means, Standard Deviations, and Intercorrelations for All Study Variables for Student Sample

Variables	Mean	SD	1	2	3	4	5	6
1APSSStandards	39.23	6.57	--	--	--	--	--	--
2APSDiscrepancy	44.67	16.00	.184*	--	--	--	--	--
3CharacterShame	21.68	8.33	-.174*	.413***	--	--	--	--
4BehavioralShame	19.71	6.90	-.093	.379***	.752***	--	--	--
5Bodily Shame	8.25	3.53	-.154**	.364***	.653***	.656**	--	--
6TTM Severity	.8362	2.77	-.210***	-.005	.081	.049*	.045	--

**p<.01

***p<.001

Table 3. Between groups mean differences for Clinical and Student samples on all variables

Variables	Clinical	Sample	Student	Sample
	Mean	SD	Mean	SD
APS Standards	39.75	7.88	39.23	6.57
APS Discrepancy	58.55***	16.41	44.67***	16.00
Character Shame	35.01***	8.76	21.68***	8.33
Behavioral Shame	27.50***	7.28	19.71***	6.90
Bodily Shame	12.72***	3.01	8.25***	3.53
TTM Severity	16.66***	5.81	.8362***	2.77

**p<.01

***p<.001

Tests of mediation were then conducted to examine whether any of the three subtypes of shame (characterological, behavioral or bodily) explained the relationship between multidimensional perfectionism and hair pulling severity. Results of the bootstrapping analyses for the clinical sample showed that none of the shame subscales mediated the relationship between adaptive perfectionism and TTM symptom severity as noted by zero being in all of the constructed confidence intervals. However, I found that behavioral shame mediated the relationship between maladaptive perfectionism and TTM symptom severity as noted by zero not being in the constructed confidence intervals, and between a small and medium effect size. Results of the bootstrapping analyses for the clinical sample with adaptive perfectionism as the independent variable are shown in Table 4 and Figure 1 and maladaptive perfectionism as the independent variable are in Table 5 and Figure 2. For the student sample, results of the bootstrapping analyses showed that none of the shame subscales mediated the relationship between adaptive perfectionism and TTM symptom severity or between maladaptive perfectionism and TTM symptom severity as noted by zero being in all of the constructed confidence intervals. Results of the bootstrapping analyses for the student sample with adaptive perfectionism as the independent variable are in Table 6 and Figure 3 and maladaptive perfectionism as the independent variable are in Table 7 and Figure 4.

Next, I evaluated whether moderation was present in the clinical and student groups to determine whether the relationship between the perfectionism and hairpulling depended on the level of shame. . For tests of moderation in regard to the student sample, the interaction terms (adaptive perfectionism X shame and maladaptive perfectionism X shame) did not account for significant additional variation in hair pulling ($\Delta R^2 = .001$),

$F(2, 281) = 0.154$ $p = .042$. In regards to the clinical sample, the interaction terms (adaptive perfectionism X shame and maladaptive perfectionism X shame) did not account for significant additional variation in hair pulling ($\Delta R^2 = .014$), $F(2, 108) = 0.854$ $p > .031$.

Table 4

*Mediation Analysis Results For Adaptive Perfectionism,
Clinical*

Dependent Variable TTM Severity (MGHS)	Path/Effect	B	SE	β	95% CI
AR ² = .0987					
F (3, 114) = 2.365*					
C					
a1 (ADAPTIVE -> CHARSHAME)		-.1319	.0819	-.177	
a2 (ADAPTIVE -> BEHSHAME)		-.2211	.1120	-.187	
a3 (ADAPTIVE -> BODYSHAME)		.0924	.0877	.111	
b1 (CHARSHAME -> MGHS)		-.0608	.0935	-.149	
b2 (BEHSHAME -> MGHS)		-.0018	.0860	-.003	
b3 (BODYSHAME -> MGHS)		.2549	.1015	.319*	
c' (ADAPTIVE -> MGHS)		-.0488	.2183	-.025	
a1 X b1		-.1588	0.837	-.215	
a2 X b2		.0004	.0011	.0202	-.0396, .0480
a3 X b3		.0235	.0006	.0292	-.0195, .1015
Total		.0030	-.0027	.0155	-.0222, .0412
Total		.0269	.0259	-.0010	-.0352, .1178

Note: ADAPTIVE = Almost Perfect Scale - Revised (APS-R) Standards Subscale; MDAPTIVE = APS-R Discrepancy Subscale; CHARSHAME = Experiences of Shame Scale (ESS) - Characterological Shame Subscale; BEHSHAME = Experiences of Shame Scale (ESS) - Behavioral Shame Subscale; BODYSHAME = Experiences of Shame Scale (ESS) - Bodily Shame Subscale; MGHS = Massachusetts General Hospitaling Scale (MGHS) Adult. For paths, C = total effect of independent variable (IV) on dependent variable (DV); a = IV to mediator; b = direct effect of mediator on DV; c' = direct effect of IV on DV; a X b = indirect effect of IV on DV through mediator. CI = confidence interval. *p < .05, **p < .01, ***p < .001.

Table 5

*Mediation Analysis Results For Maladaptive Perfectionism,
Clinical*

Dependent Variable	Path/effect	B	SE	β	95% CI
TTM Severity (MGHS)					
$AR^2 = .0987$					
$F(3, 114) = 2.365^*$					
	C				
	a1 (MDAPTIVE -> CHARSHAME)	-.0648	.0393	.193	
	a2 (MDAPTIVE -> BEHSHAME)	-.2775	.0538	.512***	
	a3 (MDAPTIVE -> BODYSHAME)	.2117	.0421	.460***	
	b1 (CHARSHAME -> MGHS)	-.0608	.0935	.477***	
	b2 (BEHSHAME -> MGHS)	-.0018	.0860	-.003	
	b2 (BODYSHAME -> MGHS)	.2549	.1015	.319*	
	c' (MDAPTIVE -> MGHS)	-.0488	.2183	-.025	
	a1 X b1	.0155	.0447	.044	
	a2 X b2	-.0005	-.0023	-.0018	-.0478, .0458
	a3 X b3	.0540	.0542	.0002	.0126, .1134
	Total	-.0042	-.0025	.0016	-.0379, .0341
	Total	.0493	.0493	.0000	.016, .0959

Note: ADAPTIVE = Almost Perfect Scale – Revised (APS-R) Standard's Subscale; MDAPTIVE = APS-R Discrepancy Subscale; CHARSHAME = Experiences of Shame Scale (ESS) – Characterological Shame Subscale; BEHSHAME = Experiences of Shame Scale (ESS) – Behavioral Shame Subscale; BODYSHAME = Experiences of Shame Scale (ESS) – Bodily Shame Subscale; MGHS = Massachusetts General Hospitaling Scale (MGHS) Adult. For paths, C = total effect of independent variable (IV) on dependent variable (DV); a X b = mediators; b = direct effect of mediator on DV; c' = direct effect of IV on DV; a X b = indirect effect of IV on DV through mediator; CI = confidence interval. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6

Mediation Analysis Results For Adaptive Perfectionism, Student

Dependent Variable TTM Severity (MGHS)	Path/effect	B	SE	β	95% CI
AR ² = .0468					
F (3, 287) = 2.7606*					
C					
a1 (ADAPTIVE -> CHARSHAME)		-.0897	.0249	-.213***	
a2 (ADAPTIVE -> BEHSHAME)		-.3284	.0668	-.259***	
a3 (ADAPTIVE -> BODYSHAME)		-.1776	.0577	-.169**	
b1 (CHARSHAME -> MGHS)		-.1232	.0294	-.229***	
b2 (BEHSHAME -> MGHS)		.0268	.0319	.081	
b3 (BODYSHAME -> MGHS)		-.0153	.0380	-.038	
c' (ADAPTIVE -> MGHS)		-.0071	.0650	-.009	
a1 X b1		-.0845	.0262	-.201**	
a2 X b2		-.0088	-.0088	.0003	-.0227, .0065
a3 X b3		.0027	.0029	.0002	-.0324, .0094
Total		.0009	.0010	.0001	-.0043, .0185
		-.0052	-.0049	.0071	-.0227, .0138

Note: ADAPTIVE = Almost Perfect Scale – Revised (APS-R) Standards Subscale; MDAPTIVE = APS-R Discrepancy Subscale; CHARSHAME = Experiences of Shame Scale (ESS) – Characterological Shame Subscale; BEHSHAME = Experiences of Shame Scale (ESS) – Behavioral Shame Subscale; BODYSHAME = Experiences of Shame Scale (ESS) – Bodily Shame Subscale; MGHS = Massachusetts General Hospital Scale (MGHS) Adult. For paths, C = total effect of independent variable (IV) on dependent variable (DV); a = IV to mediators; b = direct effect of mediator on DV; c' = direct effect of IV on DV; a X b = indirect effect of IV on DV through mediator; CI = confidence interval. *p < .05, **p < .01, ***p < .001.

Table 7

*Mediation Analysis Results For Maladaptive Perfectionism,
Student*

Dependent Variable TTM Severity (MGHS)	Path/effect	B	SE	β	95% CI
AR ² = .0468	C	.0031	.0102	.018	
F (3, 287) = 2.7606*	a1 (MDAPTIVE -> CHARSHAME)	.2399	.0275	.461***	
	a2 (MDAPTIVE -> BEHSHAME)	.1770	.0237	.410***	
	a3 (MDAPTIVE -> BODYSHAME)	.0899	.0121	.407***	
	b1 (CHARSHAME -> MGHS)	.0268	.0319	.081	
	b2 (BEHSHAME -> MGHS)	-.0153	.0380	-.038	
	b3 (BODYSHAME -> MGHS)	-.0071	.0650	-.009	
	c' (MDAPTIVE -> MGHS)	.0000	.0117	.000	
	a1 X b1	.0064	.0074	-.0003	-.0084 .0210
	a2 X b2	-.0027	-.0048	.0002	-.0126, .0065
	a3 X b3	-.0006	.0046	.0001	-.0090, .0094
	Total	.0031	.0052	.0000	-.0062, .0142

Note: ADAPTIVE = Almost Perfect Scale – Revised (APS-R)
Standards Subscale: MDAPTIVE = APS-R Discrepancy Subscale;
CHARSHAME = Experiences of Shame Scale (ESS) –
Characterological Shame Subscale; BEHSHAME = Experiences of
Shame Scale (ESS) – Behavioral Shame Subscale; BODYSHAME =
Experiences of Shame Scale (ESS) – Bodily Shame Subscale; MGHS
= Massachusetts General Hospitaling Scale (MGHS) Adult. For paths,
C = total effect of independent variable (IV) on dependent variable
(DV); a = IV to mediators; b = direct effect of mediator on DV; c' =
direct effect of IV on DV; a X b = indirect effect of IV on DV through
mediator; CI = confidence interval. *p < .05, **p < .01, ***p < .001.

Figure 1. Path Models of the relationships between adaptive perfectionism, shame (character, behavioral, and bodily) and TTM severity in clinical sample. The path coefficients are standardized regression coefficients. For paths, c = total effect of perfectionism on TTM severity; c' = direct effect of perfectionism on outcome variable. * $p < .05$, ** $p < .01$, *** $p < .001$.

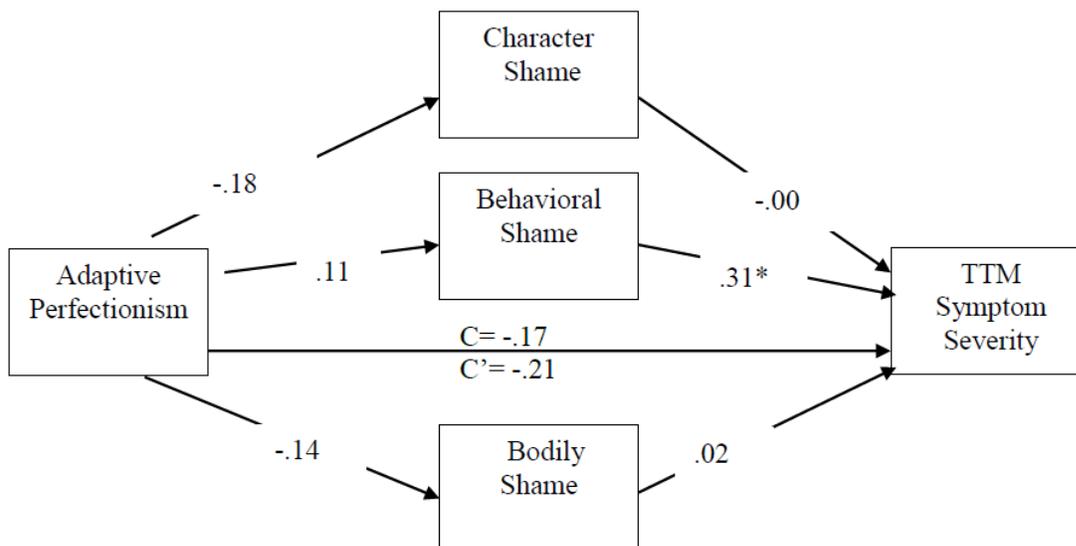


Figure 2. Path Models of the relationships between maladaptive perfectionism, shame (character, behavioral, and bodily) and TTM severity in clinical sample. The path coefficients are standardized regression coefficients. For paths, c = total effect of perfectionism on TTM severity; c' = direct effect of perfectionism on outcome variable. * $p < .05$, ** $p < .01$, *** $p < .001$.

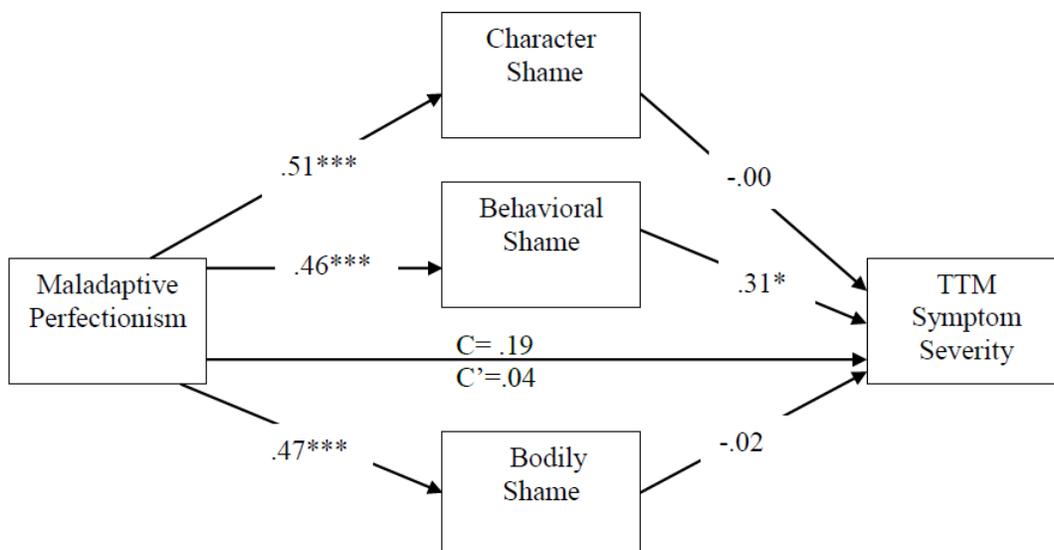


Figure 3. Path Models of the relationships between adaptive perfectionism, shame (character, behavioral, and bodily) and TTM severity in student sample. The path coefficients are standardized regression coefficients. For paths, c = total effect of perfectionism on TTM severity; c' = direct effect of perfectionism on outcome variable. * $p < .05$, ** $p < .01$, *** $p < .001$.

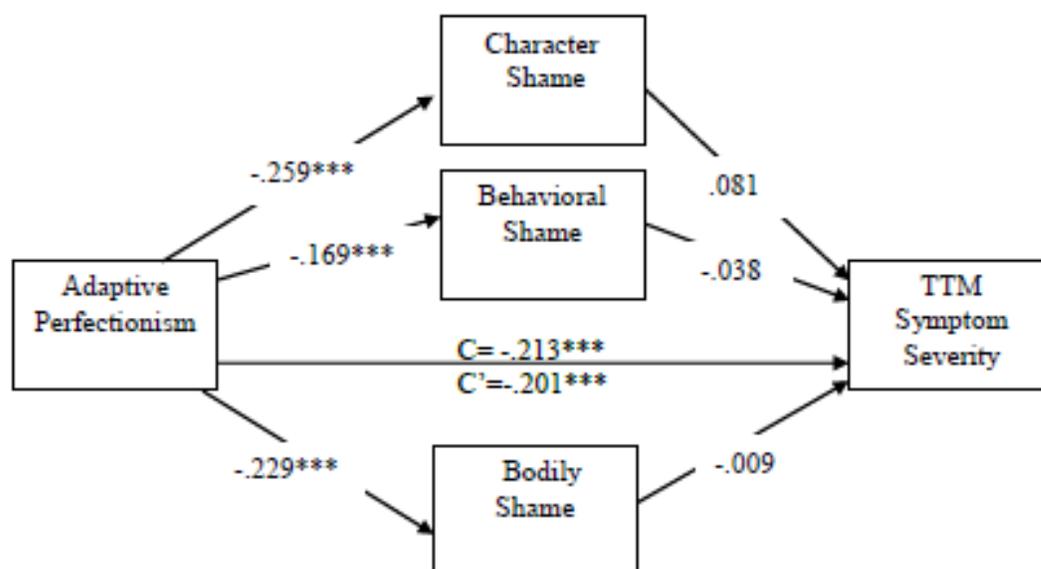
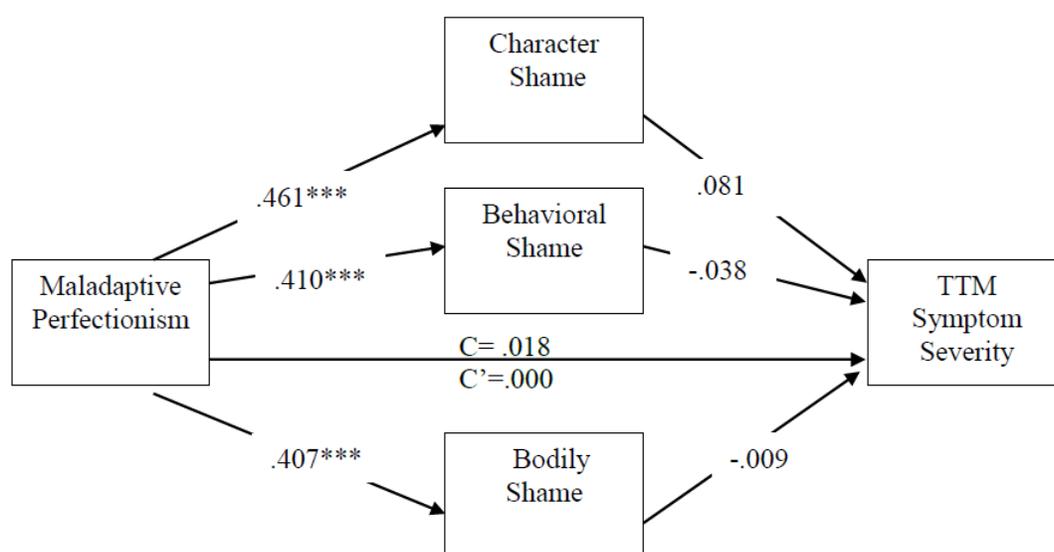


Figure 4. Path Models of the relationships between maladaptive perfectionism, shame (character, behavioral, and bodily) and TTM severity in student sample. The path coefficients are standardized regression coefficients. For paths, c = total effect of perfectionism on TTM severity; c' = direct effect of perfectionism on outcome variable. * $p < .05$, ** $p < .01$, *** $p < .001$.



Discussion

In this study, the relationships between perfectionism, multidimensional shame, and TTM symptom severity were investigated in a clinical sample of individuals with TTM and in a college student sample. More specifically, I explored the extent to which different shame dimensions (characterological, behavioral, and bodily shame) mediated or moderated the relationship between adaptive and maladaptive perfectionism and TTM symptom severity in a clinical and student sample. Tests of mean differences indicated that participants in the clinical sample reported higher levels of maladaptive perfectionism, all 3 types of shame, and TTM symptom severity than the student sample. There were no significant differences in adaptive perfectionism between the student group and the clinical group. Only behavioral shame mediated the relationship between maladaptive perfectionism and TTM symptom severity in the clinical sample. Tests of moderation indicated that shame did not significantly moderate the perfectionism to hairpulling relationship for either group.

The results of correlational tests showed that higher maladaptive perfectionism is related to higher levels of all 3 subtypes of shame. This data is consistent with the view that maladaptive perfectionists perceive that they are consistently falling short of their goals, and experience more distress and self-recrimination as a result. In contrast, individuals higher in adaptive perfectionism have high standards but are more flexible and forgiving in their personal evaluations, experiencing less distress, shame and impairment as a result. The results are consistent with previous research showing that adaptive perfectionism is positively associated with multiple positive outcomes such as lower levels of depressive symptoms and increased levels of hope (Ashby et al.; Rice et

al.), whereas maladaptive perfectionism is related to a number of mental health related issues, such as more frequent use of unhealthy coping strategies, increased levels of depressive symptoms, higher levels of avoidant coping, and lower levels of self-esteem, among others (Santanello & Gardner, 2007; Dunkley, Sanislow, Grilo, & McGlashan, 2006; Dunkley, Zuroff, & Blankstein, 2003; Rice, Ashby, & Slaney, 1998).

The results of this study reinforced differential responses by adaptive or maladaptive perfectionism through tests of mediation as well. In this study, behavioral shame mediated the relationship between maladaptive perfectionism and TTM symptom severity for the clinical sample, but did not show any mediation between adaptive perfectionism and TTM symptom severity for this same group. These results suggest that individuals with TTM that are high in maladaptive perfectionism are likely to feel shameful about their hairpulling behaviors. Further, it is suggested that this shame results in more severe and frequent hairpulling behavior, decreased levels of perceived control over hairpulling, and increased levels of perceived distress and impairment.

It is notable that individuals from the clinical sample also exhibited significant positive relationships between maladaptive perfectionism and all 3 subtypes of shame (characterological, behavioral and bodily), but that behavioral shame was the only one of these that accounted for the relationship between maladaptive perfectionism and hairpulling symptom severity. Although higher levels of characterological and bodily shame did not explain the relationship between perfectionism and TTM severity, the finding that individuals with TTM have higher levels of different types of shame supports the idea that shame is an important factor for clients dealing with TTM and the therapists who treat them. Future research should further explore how elevated levels of these other

shame subtypes impact individuals with TTM, attending to wellbeing outcomes and related mental health issues, such as anxiety and depression.

This study suggests that for individuals with TTM who also experience maladaptive perfectionism (i.e., discrepancy), behavioral shame is a mechanism that can explain the severity of the TTM behaviors. These findings imply that individuals with TTM do not experience more severe hairpulling behaviors or impairment because of shame around their physical appearance or because they feel that they are characterologically flawed in some way, but that they do because of shame around the behaviors. This is in contrast to other body-focused repetitive behaviors, such as nonsuicidal self injury (NSSI) and some subtypes of dermatillomania. For example, some authors suggest that individuals who deal with NSSI initially tend to do damage to their bodies because they view themselves as inherently bad or characterologically flawed (e.g., Yip, 2006). This study supported the notion that feelings of characterological shame do not explain symptom severity in clients with TTM. Instead, shame over the hairpulling behavior itself appears to explain the relationship between maladaptive perfectionism and symptom severity for individuals in this clinical population (i.e., “I see myself as always falling short of my behavioral standards, which leads me to feel ashamed that I continue to do these behaviors, which in turn leads to increased severity and frequency of my TTM”).

No significant mediation or moderation was found in the student sample. This may be due to insufficient power, due to the comparably low levels of compulsive hairpulling in the college student in contrast to the clinical sample of individuals with TTM. Interestingly, approximately 4% of the student sample endorsed levels of TTM

behaviors consistent with a clinical diagnosis, while approximately 12% nominated nonclinical levels of hairpulling behaviors. These findings are consistent with several studies evaluating the epidemiology of TTM and compulsive hairpulling in college samples (e.g., Christenson, Pyle, & Mitchell, 1991). These studies suggest that 1.5% of males and 3.4% of females endorse hairpulling to a clinically significant degree, with .6% endorsing all diagnostic criteria of TTM. Similarly, some surveys of university students have indicated that nonclinical hair pulling behaviors are found in up to 15.3% of these participants (Stanley, Borden, Bell, & Wagner, 1994). These rates of both TTM and non-clinical hairpulling behavior in this college student sample emphasize the need for continued research on how these issues impact the general population across the lifespan.

Limitations and Future Research

While this is one of the first studies to investigate how multidimensional shame mediates the relationships between multidimensional perfectionism and TTM symptom severity, this study has a number of limitations that need to be considered. First, due to the cross-sectional design, it is not possible to make directional hypotheses. Future researchers should consider using longitudinal designs to better understand how these various constructs interact. Second, this study relied upon self-report measures only. In light of this, there could be some elements of social comparison or positive self-management that may have influenced the findings of this study. Individuals with TTM may also have had greater comfort and experience with talking about their hairpulling behaviors, as well as a greater overall awareness of the impact of hairpulling than participants in the student sample. Feelings of stigma, a lack of comfort with the topic, or

limited awareness about the frequency of the behaviors might have led to underreporting of hairpulling behaviors in the student sample.

Lastly, there were substantial differences in the demographics of the clinical sample and the college student sample. The majority of the clinical participants in the present study were female and white, and tended to be older than college student participants. Due to the nature of the sampling, they were also from a much more geographically diverse area than the college students. Conversely, the college student data was collected at one university, and participants were significantly more ethnically diverse, with many more males participating and less variability in the ages of the participants. These differences in the demographics of the samples may have also contributed to a lack of significant findings for the student sample. Even considering these limitations, this study provided preliminary evidence that behavioral shame mediates the relationships between maladaptive perfectionism and TTM symptom severity.

Implications

The results of this study have several important implications for therapists and researchers working with TTM and compulsive hairpulling. First, it is essential that professionals working with TTM remember that all forms of perfectionism are not created equal. In this study only maladaptive perfectionism (as denoted by high levels of discrepancy) was found to be associated with characterological, behavioral and bodily shame for clinical participants, with only behavioral shame mediating the relationship between maladaptive perfectionism and TTM symptom severity. Adaptive perfectionism (denoted by high standards and low discrepancy), the positive striving to meet one's

goals, was not significantly related to TTM severity. These results suggest that it is important to assess the type of perfectionism a client experiences before assuming that it is pathological or is contributing to the maintenance of their TTM behaviors.

In the clinical sample, only behavioral shame mediated the relationship between maladaptive perfectionism and TTM symptom severity as assessed by the MGHS. This finding suggests that clinicians working with clients with TTM must attend to client's feelings of shamefulness surrounding their inability to "just stop pulling" (Penzel, 2003). This finding is important, as many clinicians and clients spend significant time in treatment attempting to work through shame related to TTM's impact on physical appearance. Physical appearance and characterological shame may be present in clients with TTM, however the finding that only behavioral shame mediates the relationship between maladaptive perfectionism and hairpulling severity suggests that behavioral shame must be a focus of treatment if the end goal is symptom reduction and reduced impairment.

Because behavioral shame is a mechanism that leads to higher levels of symptom severity, therapists should target behavioral shame as a means to help bring about changes in the frequency and intensity of clients TTM behaviors. This may be accomplished by a number of means. One example is having explicit conversations about client's shame experiences related to their behavior, using the therapeutic relationship to minimize tendencies to minimize the frequency and severity of the behaviors. This can reduce secretiveness and shame that often prevents effective help-seeking behaviors (O'Sullivan, et al., 1997). In addition, therapists can help clients to reduce shame around their TTM behaviors by providing psychoeducation about the prevalence and functions of

hairpulling. Some of these functions include pulling for emotional regulation purposes, for the neurochemical rewards experienced while pulling, or as a means to focus attention or avoid boredom (e.g., Duke et al., 2002). Helping a client understand that their behaviors do have a function can help to reduce feelings of shame, increase levels of openness and promote an environment for the learning of new coping skills and alternative, healthier behaviors.

Consistent with the results of the current study, previous research findings suggest that individuals with TTM commonly report negative self-referencing emotions such as shame in response to their hair pulling, as well as frustrations with being unable to control these behaviors (Casati et al., 2000; du Toit et al., 2001; Stemberger et al., 2000). In addition, this study suggests that while other types of shame may not directly contribute to TTM symptom severity and impairment, characterological and bodily do appear to be elevated in individuals with TTM as compared to traditional college students. Further research and clinical practice should seek to understand the impact of these other subtypes of shame on the wellbeing of individuals with TTM.

A number of researchers and authors have noted that many individuals with TTM and compulsive hairpulling tend to be female and white (Christenson, Pyle, & Mitchell, 1991). Though these trends were apparent in the clinical sample for this study, it is possible that this view is biased by traditional means of subject recruitment, the targeting of social media and online communities, and the use of nonprofit organizations with less diverse members. Interestingly, this study suggests that college students in this sample from a diverse, public university in the Southeastern United States exhibited higher levels

of TTM and compulsive hairpulling than previous studies, wherein the samples were less ethnically diverse (Bohne et. al).

Also notable is the significant number of student participants who experienced compulsive hairpulling or met criteria for TTM, but who had never been diagnosed or were even aware of the existence of TTM as a diagnosable condition. Although standard intake interviews rarely assess for BFRBs such as TTM, these findings support the idea that many individuals experience these behaviors, even if their hairpulling does not meet criteria for TTM. This is relevant, because although clients may not mention these behaviors or see them as anything but a problematic habit, a number of studies suggest that people can experience significant impairment and distress from TTM and compulsive hairpulling (e.g., Keuthen et al., 2001). Consequently, it is critical that therapists ask their clients about behaviors such as compulsive hairpulling and other SIBs or BFRBs. Finally, the results of this study suggest the need for greater education on BFRBs and increased advocacy for individuals who experience these behaviors. Particular attention should be given to ethnic minorities and men, who may exhibit higher levels of TTM and compulsive hairpulling than previously reported and may be less likely to seek clinical services.

References

- American Psychological Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, D.C.: APA.
- Andrews B, Qian M, Valentine J D (2002). Predicting depressive symptoms with a new measure of shame: The experience of shame scale. *British Journal of Clinical Psychology*. 41, 29-42.
- Ashby, J., Rice, K., & Martin, J. (2006). Perfectionism, shame, and depressive symptoms. *Journal of Counseling and Development*, 34, 148-156.
- Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-181.
- Bohne, A., Keuthen, N., Tuschen-Caffier, B., & Wilhelm, S. (2005). Cognitive inhibition in trichotillomania and obsessive compulsive disorder. *Behaviour Research and Therapy*, 43, 923-942. doi:10.1016/j.brat.2004.06.014
- Casati, J., Toner, B., & Yu, B. (2000). Psychosocial issues for women with trichotillomania. *Comprehensive Psychiatry*, 41, 344-351.
doi:10.1053/comp.2000.9012
- Christenson, G., Chernoff-Clementz, E., & Clementz, B. (1992). Personality and clinical characteristics in patients with trichotillomania. *Journal of Clinical Psychiatry*, 53, 407-421.
- Christenson, G., & Mitchell, J. (1991). Trichotillomania and repetitive behavior in bulimia nervosa. *International Journal of Eating Disorders*, 10, 593-598.

- Christenson, G., Pyle, R., & Mitchell, J. (1991). Estimated lifetime prevalence of trichotillomania in college students. *Journal of Clinical Psychiatry, 52*, 415-416.
- Christenson, G., & Mackenzie, T. (1995). Trichotillomania, body dysmorphic disorder, and obsessive-compulsive disorder. *Journal of Clinical Psychiatry, 56*, 211-212.
- du Toit P.L., van Kradenburg, J., Niehaus, D.H., Stein, D.J. (2001). Characteristics and phenomenology of hairpulling: An exploration of subtypes. *Comprehensive Psychiatry, 2*, 247-256. doi:10.1053/comp.2001.23134
- Duke, D., Bodzin, D., Tavares, P. , Geffken, G. , & Storch, E. (2009). The phenomenology of hairpulling in a community sample. *Journal of Anxiety Disorders, 23*, 1118-1125. doi:10.1016/j.janxdis.2009.07.015
- Duke, D., Keeley, M., Geffken, G. , & Storch, E. (2010). Trichotillomania: A current review. *Clinical Psychology Review, 30*, 181- 193. doi:10.1016/j.cpr.2009.10.008
- Fedewa, B. , Burns, L. , & Gomez, A. (2005). Positive and negative perfectionism and the shame/guilt distinction: Adaptive and maladaptive characteristics. *Personality & Individual Differences, 38*, 1609-1619. doi:10.1016/j.paid.2004.09.026
- Gluhoski, V. (1995). A cognitive approach for treating trichotillomania. *Journal of Psychotherapy Practice & Research, 4*, 277-285.
- Graber, J., & Arndt, W. (1993). Trichotillomania. *Comprehensive Psychiatry, 34*, 340-49.
- Hajcak, G. , Franklin, M. , Simons, R. , & Keuthen, N. (2006). Hairpulling and skinpicking in relation to affective distress and obsessive-compulsive symptoms. *Journal of Psychopathology and Behavioral Assessment, 28*, 179-187. doi: 10.1007/s10862-0059001-x

- Keuthen, N., O'Sullivan, R. , Ricciardi, J. , Shera, D., & Savage, C.,. (1995). The Massachusetts General Hospital (MGH) Hairpulling Scale: Development and Development and factor analyses. *Psychotherapy and Psychosomatics*, *64*, 141-168.
- Keuthen, N., Stein, D., & Christenson, G. (2001). *Help for hair pullers: Understanding and coping with trichotillomania*. Oakland, CA: New Harbinger.
- Lochner, C., Stein, D. J., Woods, D., Pauls, D. L., Franklin, M. E., Loeke, E. H., & Keuthen, N. J. (2011). The validity of DSM-IV-TR criteria B and C of hair pulling disorder (trichotillomania): Evidence from a clinical study. *Psychiatry Research*, *189*(2), 276-280. doi:10.1016/j.psychres.2011.07.022
- Lutwak, N., & Ferrari, J. (1996). Moral affect and cognitive processes: Differentiating shame from guilt among men and women. *Personality and Individual Differences*, *21*, 891-896.
- Mansueto, C., Golomb, R. , Thomas, A. , & Stemberger, R. (1999). A comprehensive model for behavioral treatment of trichotillomania. *Cognitive and Behavioral Practice*, *6*, 23-43.
- Miller, S. (1996). *Shame in context*. New York, NY: Routledge.
- Norberg, M., Wetterneck, C., Woods, D., & Conelea, C. (2007). Experiential avoidance as a mediator of relationships between cognitions and hair-pulling severity. *Behavior Modification*, *31*, 367-381. doi:10.1177/0145445506297343
- O'Sullivan, R., Keuthen, N. , Christenson, G. , Mansueto, C. , Stein, D. (1997). Trichotillomania: Behavioral symptom or clinical syndrome? *American Journal of Psychiatry*, *154*, 1442-1449.

- Penzel, F. (2003). *The Hairpulling Problem: A Complete Guide to Trichotillomania*. New York, NY: Oxford.
- Preacher, K., & Hayes, A. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717-731.
- Preacher, K., & Hayes, A. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.
- Rice, K. G., & Ashby, J.S. (2007). An efficient method for classifying perfectionists. *Journal of Counseling Psychology, 54*, 72-85. doi:10.1037/0022-0167.54.1.72
- Rothbaum, B., Shaw, L., Morris, R., & Ninan, P. (1993). Prevalence of trichotillomania in a college freshman population. *Journal of Clinical Psychiatry, 54*, 72-81.
- Slaney, R., Rice, K., Mobley, M., Trippi, J., & Ashby, J. (2001). The revised almost perfect scale. *Measurement & Evaluation in Counseling & Development (American Counseling Association), 34*, 130-145.
- Stewart, S., Jenike, M., & Keuthen, N. (2005). Severe obsessive-compulsive disorder with and without comorbid hair pulling: Comparisons and clinical implications. *Journal of Clinical Psychiatry, 66*, 864-877.
- Stoeber, J. , Harris, R. , & Moon, P. (2007). Perfectionism and the experience of pride, shame, and guilt: Comparing healthy perfectionists, unhealthy perfectionists, and nonperfectionists. *Personality and Individual Differences, 43*, 131-141.
doi:10.1016/j.paid.2006.11.012
- Stoeber, J. , Kempe, T. , & Keogh, E. (2008). Facets of self-oriented and socially

prescribed perfectionism and feelings of pride, shame, and guilt following success and failure. *Personality and Individual Differences*, 44, 1506-1516.

doi:10.1016/j.paid.2008.01.007

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhardt (Ed.), *Sociological methodology* (pp.290-312). San Francisco: Jossey Bass.

Tangney, J. (2002). In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 199-215). Washington, DC: American Psychological Association.

Stemberger, R., Thomas, A., Mansueto, C., & Carter, J. (2000). Personal toll of trichotillomania: Behavioral and interpersonal sequelae. *Journal of Anxiety Disorders*, 4, 97-104.

Woods, D. (2011). Trichotillomania: Awareness and Advances. *Journal of the American Academy of Child & Adolescent Psychiatry*, 50, 8, 747-748. doi: 10.1016/j.jaac.2011.05.008.

Woods, D., & Miltenberger, R. (1996). Habits, tics, and stuttering. *Behavior Modification*, 20, 216-225.

APPENDIXES

APPENDIX A

General Research Announcement

Dear Participant,

My name is Christina Noble, and I am a doctoral student in Counseling Psychology at Georgia State University in Atlanta, Georgia. I am completing a study on the relationships among perfectionism, shame and compulsive hair-pulling in both college students and a community sample. Anyone who volunteers to participate will be asked to complete a brief, anonymous online questionnaire. The questionnaire will take about 15-20 minutes to complete. In order to participate, you must be 18 years or older.

The research is being conducted under the direction of Christina Noble and Dr. Jeffrey S. Ashby from the Department of Counseling and Psychological Services at Georgia State University. If you have any questions please email Jeff Ashby at jashby2@gsu.edu or Christina Noble at cminer1@student.gsu.edu.

The LINK for the study is: www.CHP.speedsurvey.com

Thanks so much for your support!

Sincerely,

Christina Noble, MA, MS, Eds
Counseling Psychology Doctoral Student
Department of Counseling and Psychological Services
Georgia State University

APPENDIX B

Georgia State University
Department of Counseling and Psychological Services
Informed Consent

Title: Perfectionism, Shame and Compulsive Hairpulling

Principal Investigator: Jeffrey S. Ashby, PhD
Christina L. Noble, Doctoral Candidate

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate the relationships among perfectionism, shame and compulsive hairpulling. You are invited to participate because you are a student and/or experience varying degrees of compulsive hairpulling. A total of 500 participants will be recruited for this study. Participation will require 15- 20 minutes of your time.

II. Procedures:

If you decide to participate, you will complete a brief, anonymous, online survey. Survey data will be collected from April 2011 through December 2011. Participants will be recruited from undergraduate research pools, social media groups, list-servs, and the Trichotillomania Learning Center. The survey will take approximately 15-20 minutes of your time. There is no compensation for this study, but this research will provide valuable information to inform therapeutic treatment standards.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may or may not benefit you personally. Overall, we hope to gain information about personality and emotional variables that impact effective treatment of compulsive hairpulling.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide,

you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. Ashby and an approved research team will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly, such as the GSU Institutional Review Board and the Office for Human Research Protection (OHRP). Your name will not be collected and will not appear on any study records. The information you provide will be stored on firewall-protected computers. Any facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Jeff Ashby or Christina Noble at cminer1@student.gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

Please print a copy of this consent form to keep.

If you are willing to volunteer for this research, please type "I agree" below.

APPENDIX C

DEMOGRAPHICS FORM

(Noble, 2011)

1. Please indicate your age:
2. Please indicate your gender: Male
Female
Transgender
3. Please circle the racial/ethnic group with which you identify
 - a. Asian/Pacific Islander, Please specify -

 - b. Black/African American, Please specify

 - c. Caucasian/White/European American, Please specify

 - d. East Indian, Please specify

 - e. Hispanic/Latina, Please specify _____
 - f. Middle Eastern, Please specify

 - g. Multiracial/ethnic, Please specify

 - h. Native American/American Indian, Please specify

 - i. Other, Please specify

4. Are you currently taking any psychotropic medication?
 - a. Yes, Please specify _____
 - b. No
5. Have you taken any psychotropic medication in the past?
 - a. Yes, Please specify _____
 - b. No
6. Are you currently in therapy or counseling?
 - a. Yes, Please specify _____

- b. No
7. Have you ever been in therapy or counseling?
- a. Yes, Please specify _____
 - b. No
8. Please indicate your year in school or current education level:
- a. College Freshman
 - b. College Sophomore
 - c. College Junior
 - d. College Senior
 - e. High School Degree
 - f. College Degree
 - g. Other or Technical Degree
 - h. Masters Degree
 - i. Post-Masters Degree
9. If a current student, please estimate your GPA: _____
10. Please indicate your marital status:
- a. Single
 - b. In a monogamous dating relationship (i.e., dating only one person)
 - c. In a non-monogamous dating relationship (i.e., dating more than one person)
 - d. Married/Partnered
 - e. Married/Partnered, but separated
 - f. Divorced
11. Do you identify as an individual who has a disability (e.g., deaf, physical disability, etc.)
- a. Yes
Please specify _____
 - b. No
12. Please indicate your socioeconomic status (SES):
- a. Low income
 - b. Working class
 - c. Middle class
 - d. Wealthy

APPENDIX D

Diagnostic and Statistical Manual of Mental Disorders**4th Edition, Text Revision (DSM-IV-TR)****Screening Criteria for Trichotillomania**

(APA, 2000)

- A. Do you recurrently pull out your hair resulting in noticeable hair loss?
- B. Do you experience an increasing sense of tension immediately before pulling out the hair or when attempting to resist the behavior?
- C. Do you experience pleasure, gratification, or relief when pulling out the hair(s)?
- D. Have you ever received any other psychological diagnoses or medical condition?
 - a. If so, please explain: _____
- E. Does the hairpulling or its aftereffects cause you significant emotional distress or impairment in social, occupational, or other important areas of functioning?

APPENDIX E

Experience of Shame Scale (ESS)

(Andrews, Qian, & Valentine, 2002)

Instructions: Everybody at times can feel embarrassed, self-conscious or ashamed.

These questions are about such feelings if they have occurred at any time in the past year. There are no ‘right’ or ‘wrong’ answers.

Please indicate the response which applies to you.

1 = not at all 2 = a little 3 = moderately 4 = very much

1. Have you felt ashamed of any of your personal habits?
2. Have you worried about what other people think of any of your personal habits?
3. Have you tried to cover up or conceal any of your personal habits?
4. Have you felt ashamed of your manner with others?
5. Have you worried about what other people think of your manner with others?
6. Have you avoided people because of your manner?
7. Have you felt ashamed of the sort of person you are?
8. Have you worried about what other people think of the sort of person you are?
9. Have you tried to conceal from others the sort of person you are?
10. Have you felt ashamed of your ability to do things?
11. Have you worried about what other people think of your ability to do things?
12. Have you avoided people because of your inability to do things?

13. Do you feel ashamed when you do something wrong?
14. Have you worried about what other people think of you when you do something wrong?
15. Have you tried to cover up or conceal things you felt ashamed of having done?
16. Have you felt ashamed when you said something stupid?
17. Have you worried about what other people think of you when you said something stupid?
18. Have you avoided contact with anyone who knew you said something stupid?
19. Have you felt ashamed when you failed at something which was important to you?
20. Have you worried about what other people think of you when you fail?
21. Have you avoided people who have seen you fail?
22. Have you felt ashamed of your body or any part of it?
23. Have you worried about what other people think of your appearance?
24. Have you avoided looking at yourself in the mirror?
25. Have you wanted to hide or conceal your body or any part of it?

APPENDIX F

The Massachusetts General Hospital Hair Pulling Scale (MGH-HPS)

(Keuthen, O'Sullivan, Ricciardi, Shera & Savage, 1995)

Instructions: For each question, pick the one statement in that group which best describes your behaviors and/or feelings over the past week. If you have been having ups and downs, try to estimate an average for the past week. Be sure to read all the statements in each group before making your choice.

For the next three questions, rate only the urges to pull your hair.

1. Frequency of urges.

On an average day, how often did you feel the urge to pull your hair?

- 0 This week I felt no urges to pull my hair.
- 1 This week I felt an **occasional** urge to pull my hair.
- 2 This week I felt an urge to pull my hair **often**.
- 3 This week I felt an urge to pull my hair **very often**.
- 4 This week I felt **near constant** urges to pull my hair.

2. Intensity of urges.

On an average day, how intense or "strong" were the urges to pull your hair?

- 0 This week I did not feel any urges to pull my hair.

- 1 This week I felt **mild** urges to pull my hair.
- 2 This week I felt **moderate** urges to pull my hair.
- 3 This week I felt **severe** urges to pull my hair.
- 4 This week I felt **extreme** urges to pull my hair.

3. Ability to control the urges.

On an average day, how much control do you have over the urges to pull your hair?

- 0 This week I could **always** control the urges, or I did not feel any urges to pull my hair.
- 1 This week I was able to distract myself from the urges to pull my hair **most of the time**.
- 2 This week I was able to distract myself from the urges to pull my hair **some of the time**.
- 3 This week I was able to distract myself from the urges to pull my hair **rarely**.
- 4 This week I was **never** able to distract myself from the urges to pull my hair.

For the next three questions, rate only the actual hairpulling.

4. Frequency of hairpulling.

On an average day, how often did you actually pull your hair?

- 0 This week I did not pull my hair.
- 1 This week I pulled my hair **occasionally**.
- 2 This week I pulled my hair **often**.
- 3 This week I pulled my hair **very often**.
- 4 This week I pulled my hair so often it felt like I was **always** doing it.

5. Attempts to resist hairpulling.

On an average day, how often did you make an attempt to stop yourself from actually pulling your hair?

0 This week I felt no urges to pull my hair.

1 This week I tried to resist the urge to pull my hair **almost all of the time.**

2 This week I tried to resist the urge to pull my hair **some of the time.**

3 This week I tried to resist the urge to pull my hair **rarely.**

4 This week I **never** tried to resist the urge to pull my hair.

6. Control over hairpulling.

On an average day, how often were you successful at actually stopping yourself from pulling your hair?

0 This week I did not pull my hair.

1 This week I was able to resist pulling my hair **almost all of the time.**

2 This week I was able to resist pulling my hair **most of the time.**

3 This week I was able to resist pulling my hair **some of the time.**

4 This week I was **rarely** able to resist pulling my hair.

For the last question, rate the consequences of your hairpulling.

7. Associated distress.

Hairpulling can make some people feel moody, "on edge," or sad. During the past week, how uncomfortable did your hairpulling make you feel?

0 This week I did not feel uncomfortable about my hairpulling.

1 This week I felt **vaguely uncomfortable** about my hairpulling.

2 This week I felt **noticeably uncomfortable** about my hairpulling.

3 This week I felt **significantly uncomfortable** about my hairpulling.

4 This week I felt **intensely uncomfortable** about my hairpulling.

APPENDIX G

Almost Perfect Scale – Revised (APS-R)
(Slaney, Rice, Mobley, Trippi & Ashby, 2001)

Instructions: The following items are designed to measure attitudes people have towards themselves, their performance, and towards others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding. Using a pencil, please mark all of your responses on the computer answer sheet that is provided. Respond to each of the items by using the scale below to describe your degree of agreement with each item. Write the number that best describes your degree of agreement after each statement.

Strongly Disagree 1	Disagree 2	Slightly Disagree 3	Neutral 4	Slightly Agree 5	Agree 6	Strongly Agree 7
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1. I have high standards for my performance at work or at school.
2. I am an orderly person.
3. I often feel frustrated because I can't meet my goals.
4. Neatness is important to me.
5. If you don't expect much out of yourself you will never succeed.
6. My best just never seems to be good enough for me.
7. I think things should be put away in their place.
8. I have high expectations for myself.
9. I rarely live up to my high standards.
10. I like to always be organized and disciplined.
11. Doing my best never seems to be enough.
12. I set very high standards for myself.
13. I am never satisfied with my accomplishments.
14. I expect the best from myself.
15. I often worry about not measuring up to my own expectations.
16. My performance rarely measures up to my standards.
17. I am not satisfied even when I know I have done my best.
18. I am seldom able to meet my own high standards for performance.
19. I try to do my best at everything I do.
20. I am hardly ever satisfied with my performance.
21. I hardly ever feel that what I've done is good enough.
22. I have a strong need to strive for excellence.
23. I often feel disappointment after completing a task because I know I could have done better.