

EXAMINING THE ROLE OF SHAME IN SOMATIC PAIN AND SYMPTOMS

by

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Liberty University

A Dissertation Prospectus Presented in Partial Fulfillment

Of the Requirements for the Degree

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## ABSTRACT

Shame has been linked to several types of psychopathology, however its role in health and wellness is less understood. This study sought to answer the following questions to bring further theoretical understanding to the unique features that shame plays in somatic pain and symptoms. First, does internalized shame predict somatic pain and symptoms? Second, does externalized shame predict somatic pain and symptoms? Third, does internalized shame predict a greater influence over somatic pain and symptoms than externalized shame? Lastly, does externalized shame moderate the relationship between internalized shame and somatic pain and symptoms? This study revealed that internalized and externalized shame demonstrated a correlational relationship in the role in somatic pain and symptoms, however when added into the regression model externalize shame accounted for the variance of internalized shame, revealing that when compared to externalized shame, internalized shame did not have a stronger relationship to somatic pain and symptoms. Lastly results found no moderation affect between internalized shame externalized shame and somatic pain and symptoms. Limitations and future research recommendations are discussed.

*Keywords:* shame, somatic pain, somatic symptoms, internalized shame, externalized shame

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## **List of Abbreviations**

Acceptance and Commitment Therapy (ACT)

American Psychiatric Association (APA)

Cognitive Behavioral Therapy (CBT)

Diagnostic and Statistical Manual of Mental Disorders (DSM 5)

Experience of Shame Scale (ESS)

Hypothalamic-pituitary-adrenocortical Axis (HPA)

Institutional Review Board (IRB)

Pennebaker Inventory of Limbic Languidness (PILL-54)

Somatization Disorder (SD)

Test of Self-Conscious Affect (TOSCA-A)

## **CHAPTER ONE: THE PROBLEM**

Shame has been a construct in research for years, but is more recently gaining interest within the general public. While in some cases shame has been seen as an adaptive emotional experience (Van Vliet, 2008), it is more commonly identified as a contributor to mood and personality disorders (Andrews, Qian, & Valentine, 2002; Hastings, Northman, & Tangney, 2000; Lee, Scragg & Turner, 2001). As a result, many of the studies evaluating shame and psychopathology focus specifically on mood and personality disorders. This focus has been helpful in bringing understanding to pathology and the development of treatment methods. However, more research is still needed to understand how shame contributes to or inhibits physical health and wellness (Black & Garbutt, 2002; Chilton, 2012; Dickerson, Gruenewald, & Kemeny, 2004.).

### **Background of the Problem**

In 1933, Freud, the father of psychoanalysis, identified the superego as the moralizing and criticizing part of the personality that engenders shame (Gabbord, 2009). In 1971, Helen B. Lewis spent years of research differentiating shame from its often-confused counterpart guilt, giving shame a unique identity within the literature and psychology. Since then several studies have expounded on this literature evaluating shame's role in personality development and psychopathology (Andrews et al., 2002; Hastings, Northman & Tangney, 2000; Lee et al., 2001; Schoenleberg & Berenbaum, 2012; Sweeny, 2011).

The shame experience is deeply entwined with one's sense of self. Tangney, Miller, Flicker, and Barlow (1996) identified the correlation between shame reactions and negative psychological outcomes. It is linked to inward and outward anger, trauma, major depressive disorder, anxiety disorders, psychotic disorders such as schizophrenia, and personality disorders

such as narcissistic and borderline, as well as somatization disorders (Candea & Szentagotai, 2013; Tangney, Stuewig & Mashek, 2007).

In somatization, the source of pain is often unknown and therefore treatment methods are limited, frequently centering on coping strategies and pain management (American Psychiatric Association [APA], 2013). While the symptoms of those suffering are physical in nature, there is a strong underlying emotional current driving and exacerbating the symptoms. This unexplained physical pain and symptoms bring thousands of patients into general health care facilities each year (Schaefer et al., 2010). These patients have not met the criteria for a medical diagnosis; however, they experience persistent and often-repeated bodily symptoms such as headaches, fatigue, lack of energy, muscle aches, inability to focus, digestive challenges, and other pain related issues (American Psychological Association, 2013; Prince, et al., 2004).

Those with somatic symptoms often demonstrate a high level of emotional avoidance and denial while experiencing a drive and preoccupation with relieving physical pain (Prince, et al., 2004). They do this by seeking pharmaceutical treatments, preventing them from the need (or awareness) to seek alternative means of treatment such as psychotherapy; as a result, psychological treatments often go underutilized (Dickerson, Gruenewald, & Kemeny, 2004; Prince et al., 2004).

Shame has been correlated with somatization (Pineles, Street & Koenen, 2006). While this relationship needs further study and clarification, it is clear that shame influences the emotional contributions and physical processes that one experiences during somatic pain and discomfort. Symptom relief is of no doubt necessary priority; however, pharmaceutical efforts for pain management are only one avenue of treatment and are limited to providing symptom

relief moderately at best. There is an ever-increasing need for research to understand the relationship of these two aspects of health.

### **Purpose of the Study**

The purpose of this study was to examine the emotional contributions of shame in somatization by focusing specifically on externalized and internalized features of shame and to what extent they affect those experiencing somatic pain and symptoms.

### **Research Design**

This study was inspired by a study done by Pineles et al. (2006) who used a multiple regression model to evaluate shame-proneness and somatic pain and symptom. This study sought to expand this model by teasing out the construct of shame, highlighting both the internalized and externalized features. Based on this modified design, this study used a cross-sectional, multiple regression analysis, and self-report measures to identify the influence between externalized shame, internalized shame and somatic symptomology. In addition, a moderation analysis was used to determine if any interaction effect occurred between internalized shame and somatic symptomology when using externalized shame as a moderator. If the hypothesis is confirmed, this information will provide valuable insight in developing treatment methods and preventive strategies in addressing somatic symptomology.

### **Research Questions**

**RQ1:** Does internalized shame predict somatic symptoms?

**RQ2:** Does externalized shame predict somatic symptoms?

**RQ3:** Does internalized shame predict a greater influence over somatic pain and symptoms than externalized shame?

**RQ4:** Does externalized shame influence the relationship between internalized shame and somatic pain and symptoms?

### **Assumptions and Limitations**

Several limitations were considered. While this study was able to select shame scales with high levels of reliability and validity, both the measures for internalized and externalized shame have been modified, with the permission of the authors, to include the participants' past experiences with shame. Because of the distinct time differences (then and now), the instructions were specific to outline the differentiation. However, due to the cross-sectional design and gathering of self-reported information from the past, the results are reliant on best memory of the participants, leaving room for speculation.

Secondly, research suggests that those with somatization may have difficulty acknowledging any psychological symptoms and may be offended by the direct questions on the testing's measure if they feel misunderstood. It is possible, due to the high level of avoidance and denial within those with somatic pain, that the self-report survey method used to analyze shame may not be a true reflection of the shame experience of those participating in the study. Future research could focus on developing measures that cater to that specific population asking questions pertaining to shame more covertly or using a qualitative study.

Third, the participants of this study were recruited from an advertisement placed on social media (e.g., Facebook). The participants were not generated from a medical facility or required to have been clinically diagnosed. Those who participated did so based on their own level of knowledge and their perception of their physical pain and medical experiences. This means of recruitment also eliminated those who have limited internet access and those who do not participate on social media.



Lastly, SurveyMonkey was the tool used to gather the statistical information. This posed the same challenge to those who were uncomfortable using the Internet, had limited access, or were visually impaired. However, despite this limitation, the instruments themselves are in a multiple-choice format; the avenue of using the Internet to access the testing measures and administering them accordingly are not seen to affect the accuracy of the results for those who chose to participate. In turn, due to the sensitive nature of those who experience shame, studies have shown that online testing methods may prove beneficial to improve the accuracy of the results since it allows participants' identities to remain completely concealed (Riva, Terruzzi, & Anolli, 2003; Wright, 2005). Regardless, media challenges still exist and possible means for future research could include interviewing as a means of collecting data for those who are media challenged.

### **Definition of Terms**

1. *Experience of Shame Scale (ESS)* - This scale measures *externalized shame*, the experience of feeling shame, the cognitive component of being aware of what others think, and the behavioral component of avoidance and concealment as it pertains to shame (Andrews et al., 2002).
2. *Externalized shame* - A flawed sense of self based on how one views others' perception of them (Harman & Lee, 2010).
3. *Internalized shame* - A globalized flawed sense of self based on how one views themselves (Harman & Lee, 2010).
4. *Pain* - Uncomfortable and undesirable bodily (sensory) and emotional experience, with actual or potential damage (Merskey & Bogduk, 1994).

5. *Pennebaker Inventory of Limbic Languidness (PILL-54)* - This measurement will be used to evaluate physical symptoms and sensations commonly associated with stress (Pineles, Street, & Koenen 2006).
6. *Somatic symptoms* - Physical pain in the body, generally unexplained, with a preoccupation of reliving symptoms, affecting the quality of life.
7. *Test of Self-Conscious Affect (TOSCA-A)* - This scale evaluates *internalized shame*, shame-proneness as well as overall negative affect as it pertains to shame during adolescences (Tangney, Dearing, Wagner, & Gramzow, 2000).

### **Significance of the Study**

Studies have distinguished the differences between guilt and shame in their role in somatization, but more research is needed to distinguish the impact of shame on psychological health and somatic symptomology. It is suggested that due to shame's hiding nature and avoidant tendencies, it often goes unnoticed or undetected by those seeking treatment for somatic symptoms (Lumley et al., 2011). Research indicates there is a lack of understanding into the specific developmental features of somatic symptoms and that avoidant emotions and negative effect such as worry, fear, anger, shame and sadness have the ability to trigger the fear/stress response in the brain, causing a chemical response in the body (Dickerson & Gruenwald, 2004; Dickerson, Kemeny, Aziz, Kim, & Fahey, 2004). This fear/stress response is part of the natural body system; however, when it is triggered continually over a period of time, it can begin to impact the electric (nervous system) and chemical (hormonal) responses in the body (Black & Garbutt 2002; Burnner et al., 2002; Canli et al., 2001; Nelson, 2007). In a series of studies by Dickerson and Gruenewald (2004), it was discovered that shame (threats to the social self) increased pro-inflammatory cytokines and cortisol in the body. When one experiences social

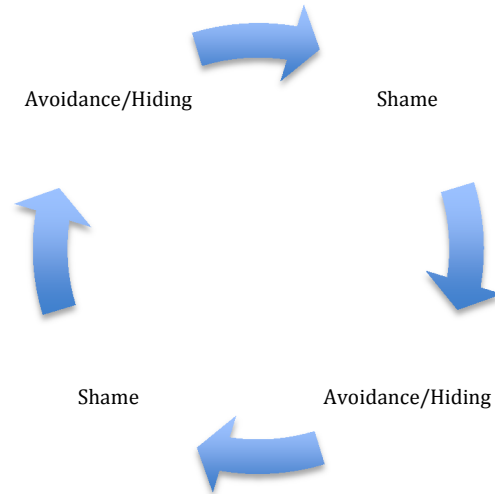
threat repeatedly, it can trigger an automatic response, become chronic, disease-relevant, and predict compromised immunological outcomes (Dickerson & Kemeny, 2004).

While the emotional experiences of shame, somatization and other contributing constructs are being researched, psychological treatment methods need further development and often go underutilized because of the physiological nature of somatic symptomology. The lack of awareness within the general population is contributing to the increase of pharmaceutical drug use and vast amounts of money spent each year in primary care facilities for treatment of somatic complaints. While shame's contribution to psychopathology has been shown (Andrews et al., 2002; Hastings et al., 2000; Lee et al., 2001), little is known on how to recognize, manage and treat it within the context of somatization. Further exploration of the emotional contributions of shame in somatization is needed to aid medical and psychological treatment development for effective long-term health and quality of life.

## **Theoretical and Conceptual Framework**

### **Shame**

Shame is made up of a complex mix of emotions, and is widely known for its negative self-defeating thoughts, emotional avoidance, and high levels of denial (Tangney et al., 1996). The inward nature of this emotional experience often results in isolation and hiding (Rüsch et al., 2007). The isolation tendencies of this emotional chaos (Brown, 2006) keep people caught in a chronic cycle, driving them deeper into shame, despite their efforts to overcome.



*Figure 1.* Cycle of shame. How shame is reinforced through a cycle of avoidance and hiding.

Shame self-objectifies events and interprets experiences as if the self is at fault, flawed or unworthy, at a generalized and global level. (Tangney, 1991; Tangney et al., 1996; Tangney et al., 2007). Those who experience shame show high levels of self-defeating thoughts and internal attribution (self-blame) when confronted with negative life events (Pineles et al., 2006; Tangney, 2001; Tangney & Tracy, 2011). Whenever the social self experiences threat (real or perceived) through rejection or negative self-recognition, the fear/stress physiological response is triggered (Dickerson & Gruenewald, 2004). It is this paradigm that provokes a desire to escape, hide, and disappear (Rüsch et al., 2007). Corresponding shame-based behavior is observed across cultures as shrinking back, slumping down in one's seat, lowering eye contact, and an overall body position that displays a submissive posture (Dickerson et al., 2004; Tracy, 2008).

While the shame experience is distinct in nature, it is often confused and used interchangeably with guilt. In her research, Lewis (1971) discovered at the very foundation there were motivational differences between shame and guilt. It was discovered that it is possible for someone to experience both shame and guilt simultaneously from a specific behavior or event.

Shame provokes feelings of hiding and escaping, whereas guilt has a restorative and reparative function. Since they both have distinctly different motivations, they can coexist.

Table 1

*Shame and Guilt Compared*

Self (unable)	Other (able)
Object of scorn, ridicule	Source of scorn, ridicule
Paralyzed, passive, helpless	Laughing, ridicule, rejection
Inferior	Superior
Involuntary body response	In control
Concealment	Functioning well

Also known as one of the self-conscious emotions (Tangney et al., 2007), shame is thought to be one of the more primal emotions that one can experience (Parker & Thomas, 2009; Tracy & Robins, 2004). Connected to the social sense of self, the emotional experience of shame is directly correlated and influenced by the nature of relationship one experiences with their primary attachment figures (Ainsworth, 1978; Bretherton, 1992; Claesson & Sohlberg, 2002; Noffke & Hall, 2008). Since the mother is the first attachment figure one encounters, it is arguably one of the most formative. Prenatal psychologist, Wendy McCarty (2002), has studied the behavioral and communication patterns of infants and has documented that infants have the intelligence to replay experiences they had in the womb, as well as demonstrate an emotional blueprint of their core beliefs. Due to the delicate process of in-utero development, the emotional experiences and relational capacity of the mother play an influential role in laying the foundation for how the social sense of self will later be perceived (Izard et al., 1980).

Attachment theory further explains how primary caregivers (including but not limited to the biological mother) continue to lay the emotional and conceptual framework through the

formative years with their relational interchanges (Bretherton, 1992). These relational interchanges provide the affective attunement that will strengthen the coping style of the developing child (secure, anxious-ambivalent or avoidant), and provide the emotional regulatory resilience to face and overcome life stressors (Ainsworth, 1978; Gilbert, Allan, & Goss, 1996; Noffke & Hall 2008). While there is a current need for the research to explore how parenting style shapes overall coping styles, Claesson and Sohlberg (2002) found avoidant mothers contributed to higher levels of shame than mothers who were verbally aggressive. These early interpersonal relationships unquestionably contribute to the way in which the self is perceived, shaping personality and worldview.

The powerful emotional experience of shame can be expressed externally or internally (Harman & Lee, 2010; Kaufman 1989). *Internalized shame* is directed at self and how one views oneself, whereas externalized shame is focused on how others view the self. While both of these shame experiences are slightly different, they are not mutually exclusive and can be experienced simultaneously (Hardman & Lee, 2010).

Also called relational shame, *externalized shame* is experienced through one's assessment of how others are interpreting them or their behaviors. Humanity has a high need for acceptance and belonging (Brown, 2006). Ongoing threats to the social self eventually convince the self that the outward threats are an expression of one's capabilities and therefore one accepts the shame experience. Harman and Lee (2010) described shame as a way to avoid social rejection and feelings of inferiority. Shame is used as a coping strategy to protect and maintain a sense of self (Gausel & Leach, 2011). These externalized processes can be both exacerbated and maintained by the internalized shame. The psychological processes that see "self as flawed"

allow and support feelings of inferiority and, therefore, aid to maintain externalized process of shame.

Internalized shame has also been labeled as trait-shame or shame-proneness which is seen as a personality disposition to shame (Claesson & Sohlberg, 2002). Studies that have focused on this type of shame have linked it to various negative psychological outcomes (anxiety, depression, anger and post-traumatic stress disorder), as well as undesirable physical health outcomes (e.g., increased levels of pre-inflammatory cytokine and cortisol; Pineles et al., 2006). Despite the internalized or externalized expression, shame deeply affects one's interpersonal relationships and overall quality of life (Claesson & Sohlberg, 2002; Kemeny, Gruenewald, & Dickerson, 2004).

### **Somatic Symptoms**

Somatization Disorder (SD) has been recognized by the APA and has been classified within the Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR (APA, 2000) and more recently revised by the DSM 5 (APA, 2013), as a disorder relating to physical pain, concerns regarding physical health, and a high-level of sought after medical care. Somatic symptoms effects are far-reaching and stretch across generational ages, gender, socio-economic status, cultures and ethnicities. It is estimated about one third of all somatic symptoms are medically unexplainable (Kroenke, Spitzer, & Williams, 2002; Prince et al., 2007). The preoccupation of worry seen within somatization is an emotionally avoidant behavior and an expression of denial (Hayes, 1994; Higgins & Endler, 1995). This denial has been positively correlated with shame and involves excessive negative evaluations of unwanted private thoughts and feelings, along with an unwillingness to experience them (Hayes, 1994). In some contexts, subtle avoidance or suppressed behavior can be viewed as self-protection to prevent perceived



disastrous outcomes. Within the context of somatization, denial works to suppress emotional experiences, increasing physical pain (Lumley et al., 2011); this consequently creates a preoccupation with the physical symptoms. Since genuine physical symptoms are experienced with often very little medical explanation for their origin, medical treatment interventions are limited.

### **Organization of Remaining Chapters**

Chapter One introduces the problem and provides the background and theoretical implications to this present study. Chapter Two will discuss prior research done on shame and somatic symptoms providing context and clarity to how these constructs fit within the literature and developmental psychology. Chapter Three includes the proposed research questions and corresponding hypotheses. It also explains the method by which the participants were selected, as well as how data was gathered and analyzed. Any risks and precautions taken to secure the confidentiality of the participants are included. Chapter Four is a summary of the findings, and Chapter Five is a discussion of the results, including any suggested areas for future research.

### **Summary**

While primarily exhibiting physical symptoms, somatic pain has strong underlying emotional components that often confuse those suffering and create a preoccupation on relieving physical symptoms. While this is understandable and pain management is necessary, focusing solely on the physical aspect limits the patients' ability to achieve health and overall wellbeing by negating the importance of emotion wholeness (Lumley et. al., 2011). Within the complex makeup of humanity, focusing on one aspect of health is incomplete and seen as ineffective. The importance of a holistic perspective, treatment of the whole person (bio/psycho/socio/spiritual), is essential (Lumley et al, 2011). This study aims to contribute to

the body of research on somatization and the importance of a holistic model of health and wellness, by exploring the emotional construct of shame within somatic pain.

## **CHAPTER TWO: REVIEW OF THE LITERATURE**

The following chapter explores various aspects of externalized and internalized shame. It builds the theoretical foundation and explains how shame connects to somatic pain. It begins by looking at shame through the lens of self-conscious emotion and how it corresponds and relates with other primal emotions. It continues by differentiating between and learning to distinguish the unique features that make up shame within psychopathology. Expounding on the link between shame and psychopathology, this chapter details a description of the physiological processes throughout the neurological networks, the electrical and chemical bodily systems, and the corresponding physical response of the hypothalamic-pituitary-adrenocortical (HPA) axis. When this response is chronic, it can be responsible for compromised health in regards to the immune system, reproductive system, and digestion system, in addition to other disease related pain. This chapter lays the framework for the hypotheses that externalized shame and internalized shame are related to and predict somatic pain. The following databases were searched to find applicable articles: APA PsychNet, Psychiatric Medicine, Psychosomatic Medicine, British Medical Journal, as well as Google Scholar.

### **Shame**

#### **The Self-Conscious Emotion**

The experience of shame is triggered when the social self is under threat (Dickerson et al., 2004). It is intricately woven into relationships and is likewise activated when the social self is under threat (Classon & Sohlburg, 2002). Brown (2006) described this experience as feeling like a warm wash, which can look like humiliation, embarrassment, being misunderstood with the often-noticeable characteristics of anger, hostility, conflict or withdrawal (p. 46; Dickerson et al., 2004; Tangney et al., 2007). Within the context of interpersonal relationships, shame may

motivate performance behavior to maintain a positive self-image, which promotes further concealment and hiding of one's true thoughts or feelings (Corssly & Rockett, 2005; Damasio et al., 2000, Gilbert, 2000; Keltner, 1995).

Shame, named one of the self-conscious emotions, is deeply connected to one's sense of self. It is intertwined with the perception of one's identity and is thought to be one of the most primal emotional experiences (Erikson, 1959; Tangney et al., 2007). Self-conscious emotions result from the cognitive appraisal of identity and include the causal attributions that follow hiding, withdrawing, anger, etc. (Harder, Culter, & Rockart, 1992). These emotional experiences expound on the basic human emotions of joy, sadness, and fear, and are often difficult to differentiate due to their complex make-up (Candea & Szentagotia, 2003). The cluster of self-conscious emotions can be identified as pride, shame, guilt, and embarrassment (Candea & Szentagotia, 2003; Dickerson et al., 2004).

Lewis (1971) spent several years researching self-conscious emotions, specifically focusing on shame and guilt, exploring what makes them unique from each other. She discovered the fundamental difference between them could only be identified within interpersonal relationships. Shame provokes a desire to hide and disappear, while guilt provokes a restorative and reparative response (De Hooge, Zeelenberg, & Breugelam, 2011; Dickerson et al., 2004). Even though shame and guilt are often seen together and have culturally been used interchangeably (Harder & Zalma, 1990), it is important to highlight that the motivational responses of shame and guilt are distinct (Harder et al., 1992). Thus, using shame and guilt interchangeably reveals a lack of awareness and theoretical understanding of their unique motivational drive (Tangney et al., 2007).

Since shame and guilt are deeply connected to one's sense of self, it is natural that they would also be linked to one's compass of morality (Dickerson & Kemeny, 2004). An inner sense of right and wrong exacerbates feelings of shame and guilt, which in many cases drives the self-conscious emotional experience (Dickerson et al., 2004). Schmader and Lickel's (2006) study brought further distinction between shame and guilt by overcoming the confusion that often happens when evaluating one's own moral behavior. They demonstrated this motivational difference by evaluating the responses of: (a) what happened to a person as a result of someone else's actions, and (b) what happened to a person as a result of one's own actions. By having the participants evaluate the behavior of others, it was expected to create an emotional separation by which the participants would be able to distinctly identify between (a) feeling a sense of responsibility for the behaviors of others (guilt), or (b) if they feel that the behavior of others said something negative about their own identity (shame). Through the study, they conducted a series of real-life events and had subjects choose what best described their motivational response. They were covert in that they did not explicitly mention guilt or shame as to confuse their subjects but allowed them to select the choice they most identified with. This study revealed that shame was highly correlated with self-caused events (as suspected), but only weakly correlated with other caused events. It further demonstrated that guilt, independently from shame, motivates a reparative relational response, whereas shame, independently from guilt, motivates a distancing response (Schmader & Lickel, 2006).

In the past, the construct of guilt has gained a majority of the focus when it comes to examining its role in psychopathology and physiological symptomology (Harder et al., 1992). However, recent research has suggested that shame, rather than guilt, is a better explanation for both psychological and somatic symptoms (Dickerson et al., 2004; Pineles et al., 2006).

The construct of shame is made up of a complex mix of thoughts, effects, and behaviors that can be experienced in isolated circumstances (externalized shame), or integrated into one's personality characteristics (internalized shame) (Claesson & Sohlberg, 2002; Gilbert et al., 1996; Van Vliet, 2008). Internalized shame is often referred to as trait shame and refers to one's personality disposition and character; it is not tied to a specific situation (Cook, 1994; Harmon & Lee, 2010). This type of shame often develops through dysfunctional interaction with attachment figures during the prenatal, infancy and formative years (Claesson & Sohlberg, 2002; Cook, 1994; Gilbert et al., 1996). Internalized shame is deeply integrated into one's worldview and shapes self-perception. A person with trait shame (internalized) can also experience shame externally, but since the shame is interpreted and experienced through the lens of prior internalized shameful schemas there is an automatic response to accept the distortions as truth—further reinforcing one's disposition to the shame experience (Claesson & Sohlberg, 2002; Gilbert, 1997; Harmon & Lee, 2010).

Eternalized shame, also known as *relational shame*, or *state shame*, can happen in isolated circumstances or persistently over a period of time (Harmon & Lee, 2010). It is often connected to one's behavior, performance, a traumatic experience or reoccurring stimuli that becomes traumatic by way of its chronic nature (Ehlers & Clark, 2000; Ramsay & Lewis, 2003; Van Vliet, 2009). Once the externalized shame is accepted as truth the manifestations are similar to those of internalized shame, a motivational drive to hide, escape and disappear (Harmon & Lee, 2010).

Since shame is a universal emotional experience, externalized and internalized shame cannot be differentiated by experience alone. It is the cognitive attributions that differ, the internal processes and working model that create the distinction. Someone who is predisposed to

shame (internalized) may accept the shame provoking experience as truth faster than one who is experiencing an isolated shame provoking circumstance (externalized) (Gilbert, 1997; Harmon & Lee, 2010; Van Vliet, 2008). Regardless of the events leading up to the individual experiencing shame, its effects are the same: an intense desire to hide, escape and disappear. These secondary experiences, the way one chooses to escape or hide, may take on different manifestations, making shame-inducing behaviors difficult to identify at face value (Dickerson et al., 2004; Harmon, & Lee, 2010; Keltner, 1995).

### **Shame in Psychopathology**

Rooted in fear and self-abasement, shame-based schemas are often found in patients experiencing psychiatric disorders (Andrews et al., 2002; Rüscher et al., 2007; Tracy & Robins, 2004; Van Vliet, 2008). Many mood and personality disorders have shame as part of the underlying foundation that drives and maintains the emotional dysfunction (Andrews et al., 2002; Haling et al. 2000; Lee et al., 2001; Wiklander et al., 2012). While some studies focus on internalized (trait) shame, there are others where the specification is not distinct. Clarity in understanding developmental features of the role shame plays within psychopathology is needed in order to apply effective treatment methods (Pineles et al., 2006).

Brown (2006) has done several studies on both men and women to bring greater clarity on what it is that dispels shame-based thinking and behaviors. Her discovery, while not unique to psychotherapy, revealed that the practice of vulnerability in both men and women is one of the most effective ways to uncover feelings of shame and dispel the cognitive distortions of isolation and hiding. Tangney et al. (2007) also found those that tested high for shame tested low in empathy, lacking the ability to relate to or have compassion on others, further reinforcing the self-focused identity crisis that those with shame experience. This vicious cycle creates a self-

fulfilling prophecy as the feared emotional experiences trigger the shame-based distortions, affects and behaviors (Leith & Baumeister, 1998; Pineles et al., 2006).

### **Developmental Theory**

Prior to birth, neurological networks and emotional frameworks are being constructed within the developing child. This framework will help make up the navigation system of one's personality, reaction responses, coping disposition, and sense of self (Dickerson et al., 2004; Pineles et al., 2006). Neurological research explains how these intricately woven networks begin forming through the emotional responses of the mother as early as one's formative experience in utero (Dickerson et al., 2004). McCarty (2002) found through her research that infants contained the capacity to remember and respond to stimuli they encountered in the womb. While technology has not been able to measure the level of stress or the release of cortisol of the fetus in utero, these levels have been identified post-birth and suggest that the fetus is capable of having this same physiological response in utero (McCarty, 2002).

John Bowlby's research on childhood relationships (i.e., attachments) with primary caregivers concluded that the emotional and relational capacity of one's primary caregivers had a direct impact on one's ability to regulate emotion and the quality of their interpersonal relationships (Ainsworth, 1978; Matos & Gouveia, 2014). When these caregiving relationships are dysfunctional and healthy loving connections are not formed and strengthened, infants develop strategies to cope with the emotional pain. These coping styles begin to emerge early on and can be observed at the infant stage and throughout one's developmental lifespan (Gilbert & Gerlsma, 1999; Greenspan, 1989; Noffke & Hall, 2008). If patterns of coping are not intercepted, they will continue to be reinforced and shape one's identity and self-perception, thus strengthening what Bowlby coined as insecure, anxious-ambivalent, or dismissive-avoidant



attachment styles (Ainsworth, 1978; Andrews & Hunter, 1997; Magai, Distle & Liker, 1995; Noffke & Hall, 2008).

Neuropsychology has further contributed to this body of research with valuable discoveries related to the brain. As a bodily organ, the brain is the only organ that is highly reliant on relationship for formation and development (Cozolino, 2010; Van Vliet, 2008). Made up of receptors within the abdomen and the cranium, the brain requires relational connection to help formulate the pathways of thought and perception. When a parent (or primary caregiver) does not have the mental and/or emotional capacity to form healthy connections or is continually emotionally dysregulated and unable to engage, then the prefrontal cortex of the developing child gets stunted (Noffke & Hall 2008). This triggers other parts of the brain to overcompensate (Van Vliet, 2009), sending the body into the flight or fight response.

This automatic limbic response (flight or fight) is a protective posture to self-soothe or self-regulate (Dickerson et al., 2004; Lavallo & Thomas, 2000; Noffke & Hall 2008; Sapolsky, Romero, & Munck, 2000). The intolerable experiences of social neglect and relational disconnection, even if only perceived, have the ability to create the same physiological response in the brain and body as one who experiences emotional trauma, shame, or physical tragedy.

Reregulating the brain from operating in a dysregulated response requires the frontal lobes (cortex) to be engaged (Cozolino, 2010; Noffke & Hall 2008). The prefrontal cortex requires relationships that have the capacity to stay present and engaged in loving interactions in order to fully develop. While this may not be possible for some based on their primary caregivers and circle of social support, research has demonstrated that psychotherapy has the ability to surrogate this process by providing the modeling and affective communication needed to re-circuit the fear based pathways (Gabbord, 2009; Noffke & Hall, 2009). Since the limbic

system and prefrontal cortex cannot be engaged at the same time, this surrogate process provides relief from the fear/stress response and allows for the patient's physical, emotional, and mental state to enter into homeostasis, allowing for new neurological pathways to form.

### **Trauma and the Physiological Response**

While physical tragedies are often first thought of when one thinks of trauma, it is also commonly experienced relationally. APA (2013) recognized the emotional and mental damage that happens through social neglect and emotional disconnection and developed a diagnostic language to identify and differentiate the symptoms that surface. The Diagnostic and Statistical Manual (DSM-5; APA, 2013) includes several different trauma and stress related disorders, including, Attachment Disorder, Disinhibited Social Engagement Disorder, Posttraumatic Stress Disorder, Acute Stress Disorder, and Adjustment Disorder. These diagnoses are not hierarchical and can have varying degrees of fear or anxiety symptoms, as well as, elements of each other.

Trauma has an indefinite ability to affect those suffering (APA, 2013). The mental and emotional processes that become disordered during exposure to the original feared stimuli create and recreate a physiological response any time even the smallest amount of memory is triggered (APA, 2013; Harmon & Lee, 2010). This can happen through smells, sounds, feelings, events, people who share same mannerisms, etc. No matter when or how a person is exposed to the traumatic stimuli, it has the ability to impact a person mentally and emotionally long after the stimuli has ceased (Tull, Gratz, Salters, & Roemer, 2004). This reoccurring mental and emotional stress creates the traumatic symptoms to exacerbate and has shown to cause impairment to the physiological functions of the body through the fear/stress response (Dickerson et al. 2004; Harman & Lee, 2010).

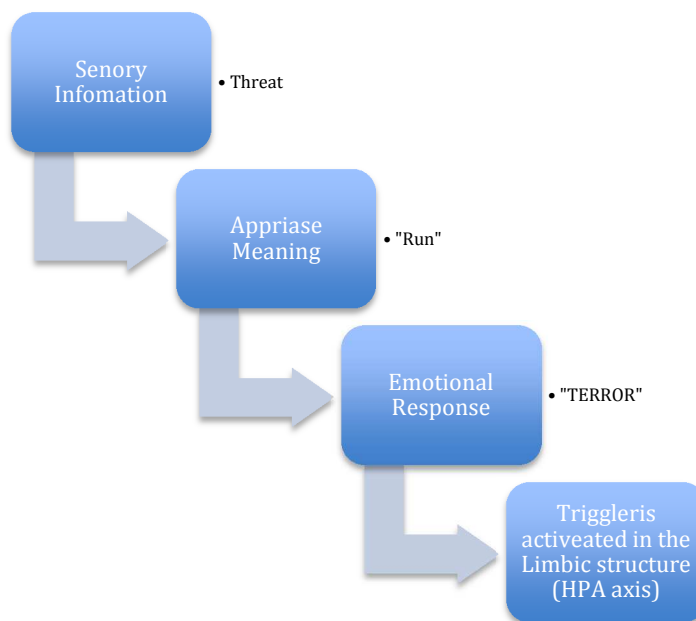
Dickerson et al. (2004) explained the role of shame in activating the body's trauma (fear/stress) response when the social sense of self is threatened. The fear/stress response is often instantaneous and acts independent from conscious thought. The prefrontal cortex receives the sensory information, determines the meaning and significance, cognitively appraising the circumstantial stimuli and then determines an emotional response. This process, as depicted in Figure 2, from the cortex to the limbic system (amygdala to the hippocampus) is almost immediate, creating a pathway for the HPA (Dickerson & Kemeny, 2004; Dickerson et al., 2004; Harman & Lee, 2010).

The neurological response to fear trips the HPA, releasing the stress hormone cortisol, and pre-inflammatory cytokine into the body activating the automatic nervous system into fight or flight (Dickerson & Kemeny, 2004; Dickerson et al., 2004; Kronfol & Remick, 2000; Watkins et al., 1999). Because of the nature and immediacy of this response, other bodily systems such as immune, digestive, and reproductive, become secondary to the message of danger that is being released in the body (Cozolino, 2010).

Life stress is expected; however, when worry becomes chronic and pervasive, it overworks the adrenals, the secondary systems in the body are compromised, and psychosomatic symptoms can result (Dickerson & Kemeny, 2004). This is the same physiological fear/stress response that is responsible for exacerbating psychosomatic symptoms within Generalized Anxiety Disorder and Major Depressive Disorder as well as other psychological, immune, and nervous system deficiencies (Gabbord, 2009).

In order to diagnose SD in the past, there needed to be a presence of physical pain without a medical diagnosis. However, gone are the days when a lack of medical diagnosis means Somatic Disorder. The DSM-5 (APA, 2013) has updated the qualifying criteria for

Somatic Symptom Disorder (SSD), bringing clarity and boundaries to what once was a bit vague and ambiguous. The DSM-5 has defined SSD based on “positive symptoms and signs” that include “distressing somatic symptoms plus abnormal thoughts, feelings, and behaviors in response to these symptoms” (APA, 2013, p. 309).



*Figure 2.* HPA axis (Dickerson, & Kemeny, 2004).

### **Somatic Symptoms**

Somatic symptoms drive hundreds of patients into primary care facilities, accounting for up to 15% of the total patients each year (Prince et al., 2007), searching for answers in response to the physical pain they routinely experience (Schaefer et al., 2010). These frequent visits are estimated to cost healthcare \$256 billion USD (Prince et al., 2007). These symptoms include headaches, fatigue, lack of energy, inability to focus, digestive problems, and other pain-related issues with repeated, persistent and often challenging symptoms (Schaefer et al., 2010).

Somatic symptoms are often recognized by their physical manifestations; however, those who suffer also exhibit cognitive features in levels of worry about body and health, as well as a

continual need for medical consultations and treatment regarding physical symptoms (Schaefer et al., 2010).

Somatic symptoms are found in Depressive Disorders and Anxiety Disorders and include several various symptoms as a qualifier for making their full diagnosis. Somatic symptoms can be discovered prior to a depressive or anxiety disorder or can seemingly arise out of nowhere with little logical rationale to their origin (APA, 2013; Lumley et al., 2011; Schaefer et al., 2010). These symptoms can overlap with other emotional disorders making diagnosing somatic pain complex. Schaefer et al. (2010) published a study that revealed two thirds of those seeking treatment for their somatic symptoms have a comorbid diagnosis with one or both of these disorders. However, one third of the patients seeking treatment for somatic symptoms continue to go therapeutically and medically undiagnosed. While there is no research indicating that those with a comorbid diagnosis are receiving therapeutic care, one third of the patients are going without treatment of any kind (Schaefer et al., 2010).

Several external factors influence somatic pain (APA, 2013). Genetics have been linked to the level of pain tolerance one experiences. Trauma is linked to the onset or exasperation of somatic pain based on the level to which one experiences abuse, tragedy, or violence. Conditioning is another factor; this refers to how one experiences and receives love and affection through their illness. Lastly, cultural norms are considered; this refers to how psychological suffering is viewed within a culture or subculture, such as physical suffering is valued and/or accepted above psychiatric suffering.

Despite the levels of worry and cognitive distortions, the physical pain is real, genuinely affecting one's daily ability and quality of life. The physical symptoms along with the cognitive distortions become so familiar they often become integrated into one's identity, drastically

affecting interpersonal relationships (APA, 2013; Dickerson, & Kemeny, 2004; Schaefer et al., 2010). While seniors and children can experience somatic pain, they are not commonly diagnosed with the disorder. This is due to the normal aging process in seniors and the lack of cognitive distortions in children (APA, 2013).

Somatic symptoms are more commonly experienced where physical illness is more culturally acceptable than emotional/mental distress (Barsky, Orav, & Bates, 2005; Schaefer et al., 2010). The onset of somatic pain differs regarding gender (more common in females), socioeconomic status, employment status, life experiences, prior psychiatric disorders or physical illnesses (APA, 2013). Somatic symptoms are more than just a combination of physical ailments; it is the underlying drive and medical seeking behavior that mark this set of symptoms apart (APA, 2013; Schaefer et al., 2010). The continual need for medical attention helps to relieve the physical concerns and cognitive distortions about one's health (Lumley et al., 2011). It is not uncommon for those who display high levels of medical seeking behavior to jump around from one health-care professional to another, feeling that the treatment recommended to them is inadequate (Barsky et al., 2005; Lumley et al., 2011). This cycle of behavior is self-propelling. Since those suffering have a high priority on alleviating physical symptoms, and psychotherapeutic treatment is not seen as a pain reliever, medical care services are the main mode of treatment. This cycle of treatment offers little alleviation to the patients, keeping them looking and searching for answers regarding their pain (Schaefer et al., 2010). These patients have spent thousands of dollars in various healthcare facilities, and have become a population of interest for many medical professionals (Barsky et al., 2005; Lumley et al., 2011). The need for more effective treatment methods is well understood and the medical community is searching for answers that will help to solve the crisis of these over-utilizers (Barsky et al., 2005). The answer

is too vast for one field of study alone. A holistic model of treatment is needed to address the complex symptoms of this population (Lumley et al., 2011).

### **Shame and Somatic Symptoms**

Within the field of psychology, studies have sought to explore and describe the nature (emotional/psychological) of somatic symptoms. However, these studies have had limited success because the demand for symptom management within the medical community continues to grow (Prince et al., 2007; Schaefer et al., 2010). The importance of a thorough biological, psychological, and social evaluation to accurately assess the nature, severity, and development of the symptoms cannot be understated. The lack of awareness in the general public is causing an even greater demand on medical professionals to find answers and solve their pain causing mystery. Medical research is continually underway to clarify and understand these unexplained symptoms (Schaefer et al., 2010). However, as stated earlier, the challenge continues to be that, because many patients' distressing symptomology is primarily physical, the issues of mental health go largely overlooked (Prince et al., 2007; Schaefer et al., 2010).

Studies have evaluated the psychological processes of those who suffer from somatic symptoms to shed insight on the emotional connections to these physiological experiences (Dickerson & Kemeny, 2004; Pineles et al., 2006). This research discovered a correlation between the emotional experiences of shame and the severity of which people experience somatic discomfort (Dickerson & Kemeny, 2004; Pineles et al., 2006). Shame is directly correlated with one's sense of self. When social rejection is experienced, it causes a similar response in the anterior cingulate cortex as one who experiences physical pain, increasing the sensitivity of the physical pain response, making pain both an emotional and sensory experience. (Dickerson & Kemeny, 2004; Lumley et al., 2011).

One's ability to identify feelings and express them is linked to increased pain severity as well as increased pain sensitivity (Lumley et al., 2011). There is research that demonstrates the mediation effect of emotion between pain inflicted and pain experienced (Lumley et al., 2011). Finding treatment measures that address the emotional processes of pain is pivotal in bringing relief to those experiencing bodily pain.

McLeod, Budd, and McClelland (1997) suggested using a behavioral medicine model to address the three main issues of somatization: the help seeking behavior, the degree of perceived threat, and the personal meaning of symptoms. While 20 plus years old, this model still holds valuable insight into the realm of somatic symptomology since patient over-utilizers are still a massive issue in our treatment centers to date (Lumley et al., 2011).

Some of the current therapeutic treatments for somatic pain include Acceptance and Commitment Therapy (ACT), Cognitive Behavioral Therapy (CBT) and Pharmacotherapy (Lumley et al., 2011). ACT is a mindfulness focused therapy model that challenges patients to identify triggering thoughts and disconnect them from the meanings they hold (Gutierrez & Hagedorn, 2013). This process allows the patient to stay in the present, operating from their prefrontal cortex, where their executive functioning is still in place (Lumley et al., 2011). Staying present and operating from the prefrontal cortex prevents clients from activating the HPA axis, allowing the body to stay in a state of homeostasis. This allows for new neurological networks to form, with the goal of redirection of the flight or fight response.

CBT, with a primary focus on thought correction, has also been used in the past with somatic pain, but has recently been shown to be less effective than ACT (Gutierrez & Hagedorn, 2013). It has been noted through the discoveries of Lumley et al. (2011) that CBT's



preoccupation with evaluation of thoughts can be shame inducing and indirectly increase the pain experience.

Therapeutic treatments do help to alleviate painful somatic symptoms. However, the percentage of patients' awareness of their psychological symptoms is small, and many of them solely rely on and utilize medical and pharmaceutical interventions. One study evaluating this disconnection reveals the doctors they interviewed struggled to diagnose their patients with somatization for fear of causing further anguish to patients (Prince et al., 2007). Even though psychological evaluations may be needed to provide comprehensive treatment and extended care, physicians are cautious to refer to mental health facilities for fear of applying the stigma of mentally ill (Prince et al., 2007).

Shedding light on the unique role that shame plays in exasperating somatic symptomology may aid in creating a simplified language and dispel stigmas that surround psychological treatment. Shame-resilience treatment models can and should be researched and further developed to expand the quality of care for those suffering with shame (Brown, 2006).

### **Summary**

This chapter gave the theoretical foundation of shame and somatic symptoms. Providing prior research and literature for a frame of reference, this chapter also explained the correlation between externalized and internalized features of shame and somatic pain and symptoms, as well as the importance for understanding how they relate and support the proposed hypotheses.

## **CHAPTER THREE: METHODS**

The purpose of the previous chapter was to understand and create a theoretical framework for examining the relationship between externalized and internalized shame and somatic symptomology. This chapter focuses on outlining the specific methods that were used in cultivating, examining, and processing the data gathered through a non-experimental cross-sectional design. This chapter also includes how the sample was chosen and gathered and the instrumentation used in the data collection process. In addition, this chapter outlines the limitations and ethical considerations of this present study.

### **Research Design**

This current study is a quantitative, non-experimental cross-sectional design to identify correlations and associated features of shame (externalized and internalized), and somatic symptoms. Shame's effect on somatic symptomatology was analyzed using a multiple regression model to identify the correlations and unique contributions of shame (externalize and internalize) when accounting for somatic pain and symptoms. Externalized and internalized shame are the independent predictor variables with somatic symptoms as the dependent variable. Somatic symptoms were analyzed by gathering information on the participants' present day experience, while shame was evaluated based on the participants' prior experience during their adolescence (13-17 years of age). The premise for the differentiation in time periods was to determine if shame precedes the somatic discomfort. Lastly, the regression analysis sought to identify if and how somatic symptoms changed when one of the independent variables (internalized shame) was varied, while the other independent variable (externalized shame) was held fixed.

### Research Questions

**RQ1:** Does internalized shame predict somatic pain and symptoms?

**RQ2:** Does externalized shame predict somatic pain and symptoms?

**RQ3:** Does internalized shame predict a greater influence over somatic pain and symptoms than externalized shame?

**RQ4:** Does externalized shame influence the relationship between internalized shame and somatic pain and symptoms?

### Hypotheses

**H<sub>01a</sub>:** It is hypothesized that internalized shame will predict somatic symptoms and that higher levels of internalized shame will predict greater levels of somatic pain. A Standardized Pearson's coefficient will be used to evaluate hypotheses 1.

**H<sub>01b</sub>:** The null hypothesis proposed is that there will be no statistically significant relationship between internalized shame and somatic symptoms, and that no statistically significant difference will be found between levels of internalized shame and somatic pain.

**H<sub>02a</sub>:** It is hypothesized that externalized shame will predict somatic symptoms, and that greater levels of shame will predict greater levels of somatic pain. Pearson's coefficient will be used to evaluate hypotheses 2.

**H<sub>02b</sub>:** The null hypothesis proposed is that there will be no statistically significant relationship between externalized shame and somatic symptoms, and that no statistically significant difference will be found between levels of externalized shame and somatic pain.

**H<sub>03a</sub>:** It is hypothesized that internalized shame will have a greater influence in somatic pain and symptoms than externalized shame. Pearson's coefficient will be used to evaluated

hypotheses 3. A Beta weight will be used to compare the strength of the relationship between internalized and externalized shame and somatic symptoms.

**H<sub>03b</sub>:** The null hypothesis proposed is that there will be no difference found between externalized shame and internalized shame and their effect on somatic pain and symptoms.

**H<sub>04a</sub>:** It is hypothesized that externalize shame will moderate the relationship between internalized shame and somatic pain and symptoms. A Pearson's Coefficient will be used to evaluate the interaction effect between internalized shame and somatic pain and symptoms.

**H<sub>04b</sub>:** The null hypothesis proposes is that externalized shame will not moderate the relationship between internalized shame and somatic pain and symptoms.

### **Selection of Participants**

Participants were gathered through those who responded to a social media advertisement on Facebook (see Appendix A). To qualify, they were required to complete the answers in full on the demographic questionnaire. Both men and women who identified themselves as over the age of 18 that met the criteria were considered and accepted into the study. With the alpha set at .05, a sample size of 90 is desirable for a clinical significance.

Participants who volunteered were asked to fill out a consent form (see Appendix B). Since the data in this study contained sensitive information, it was kept confidential through password-protected files, with only the researcher and advisors for this study having access; however, personally identifying information was not collected. General demographic information was gathered pertaining to age, educational level, socio-economic background, ethnicity, gender, marital status, and religious affiliation. Additional medical information was gathered based on years of medical treatment, the average monies spent each year seeking

treatment, and information on the type(s) of treatment sought (see Appendix C). Any demographic information that was incomplete was discarded and not included in the study.

All participants were given a series of online survey forms, which measured the type and severity of their symptomology and the best memory of both past and present externalized and internalized shame. While the subjects were not blind as to the overall purpose of the study, the details as to the overall research of the shame and somatic pain were concealed until after the surveys were complete in order to increase internal validity.

## **Instrumentation**

### **Somatic Symptoms**

The Pennebaker Inventory of Limbic Languidness (PILL-54; Pennebaker, 1982; see Appendix D) was used to measure somatic symptoms. The PILL-54 is a 54-item inventory used to measure the regularity with which the participant experiences each physical symptom. This instrument was selected based on both the accuracy and simplicity of data collection, its use in studying a general population, and its similar use in studies measuring somatic symptoms and pain severity. This assessment has been designed for use primarily online with public accessibility; while the author's permission to use the measurement was given, it was not necessary to obtain. Participants rated the frequency on a five-point Likert scale (0 = have never or almost never experienced the symptom to 5 = more than once every week). This measure has been shown to have good internal consistency ( $\alpha = .91$ ) and reliability ( $r = .83$ ). The PILL-54 is scored by summing the responses from each item, ranging from 0-220 (Pineles et al., 2006).

### **Internalized Shame**

Internalized Shame was measured using the Test of Self-Conscious Affect (TOSCA-A; Tangney et al., 1989). This measurement was chosen based on its wide use and respect within shame research as well as its adaptability to this present study. It has been used in a variety of settings ranging from general to clinical population. The adolescent version of this measure was chosen to measure the levels of shame that directly correlate with that season of the participants' lives (ages 13-17). This measurement presents shame-based questions in an implicit way, in that it does not directly mention the shame or guilt construct in order to lower the threshold of denial of shame and/or representational strategies that may alter participants' responses (Rüsch et al., 2007). The TOSCA-A presents 11 negative situational challenges in which subjects answer what best describes their most likely reaction. Each question presents possible real-life situations and gives subjects an option to select their response. Each answer contains one shame-based response and one guilt-based response using a Likert rating from 1 = not very likely to 5 = very likely. The internal consistency is reliable with an alpha of 0.88 (Pineles et al., 2006; Tangney et al., 1989).

### **Externalized Shame**

The Experience of Shame Scale (ESS; Andrews et al., 2002) was used in this study to measure the externalized experience with shame. This scale, also widely used and respected within shame research, measures the frequency of one's shame experiences during their lifetime. The ESS was chosen due to its credibility with using a general population sample, and its adaptability to this proposed study. It is a 25-item questionnaire that focuses on characterological questions (e.g., "Have you felt ashamed of any of your personal habits?"), the behavioral (e.g., "Do you feel ashamed when you do something wrong?"), and the body related

(e.g., “Have you felt ashamed of your body or any part of it?”) aspects of shame. Each item is rated on a 4-point scale (1–4) indicating the frequency of experiencing, thinking, and avoiding any of the three areas of shame. This scale has high internal consistency (Cronbach's  $\alpha = 0.92$ ) with good test-retest reliability ( $r = 0.83$ ). This scale, with the permission of the measure's author (see Appendix E), was altered for the use of this study to include participants' past experiences with shame during their adolescence (ages 13-17). Participants were given two distinct time periods (adolescence from age 13-17 and the present) in which they answered “not at all,” “a little,” “moderately,” and “very much.” Responses are graded on a four-point scale (Corssley & Rockett, 2004).

### **Assumptions**

Assumptions for the hierarchical regression were to assess a linear relationship between the quantitative Y outcome variable (somatic pain and symptoms), and to assess if the independent variables preceded the dependent variable with no extreme or bivariate outliers. Also, assumptions included an interaction effect between the dependent variables (internalized and externalized shame) and the independent variable (somatic pain and symptoms). Other assumptions were that participants would report their answers in an honest and accurate manor.

### **Procedures**

The researcher in this study submitted all procedures of the proposed study to the Institutional Review Board (IRB) for approval. After the study was approved, an advertisement (see Appendix A) was placed on social media via Facebook to recruit participants for the study. All participants were given a link to a series of online questionnaires that included an informational page explaining the purpose, intent, and possible risk of answering the questionnaires. The time that it took to complete the surveys varied from person to person;

however, the researcher suggested participants plan for one hour to allow for reflection and accurate assessment of their shame experience. For the participants who chose to move forward and complete the online assessments, they were asked to fill out the general demographic and survey assessments in their entirety. No financial contributions were awarded for their participation; however, those who chose to include their email address in a place provided separately from their assessment responses, were able to participate in a raffle for an Amazon\* gift card.

### **Data Processing and Analysis**

The data was downloaded into IBM SPSS Statistics Version 25 with the PROCESS macro for SPSS (Hayes, 2017). The data was screened. Missing data were excluded from the analysis. The responses of participants who answered catch trial items incorrectly were excluded from the data to eliminate participants who were randomly responding. A preliminary data screening determined if scores on the measures were normally distributed. The data were screened for outliers.

Pearson's correlation coefficients were used to test the hypotheses in the first and second research questions. To test the third research question, a regression model was used. For the fourth research question, moderation models were tested using PROCESS (Hayes, 2017), which is a macro for SPSS that allows testing of conditional process models. Bootstrapping, a resampling method that works well with irregular distributions (Hayes, 2017), was used.

### **Ethical Considerations**

Due to the psychological content and possible emotional ramifications of reviewing and engaging in this study, a detailed consent form (see Appendix B) along with listed possible risk and follow up suggestions were included to the benefit of the participants. In the initial consent



form, participants were given a detailed description of what the study would entail and an option for them to participate anonymously if desired, should they electronically agree electronically to participate with informed consent.

With the intent to eliminate and reduce any possible risk to the participants, the researcher of this study adhered to any and all guidelines set by the IRB. The information that gathered within this study was for research purposes only and will not be used for any other purpose. All data was password protected and only accessible by the researcher and their supporting staff. Approval for the proposed study was obtained and every precaution was taken to ensure that participants were in full awareness of what they were consenting to in this study.

### **Summary**

This chapter has included an explanation of the process of data collection and the instrumentation, and design that was used. Also outlined in this chapter is the information as to how the participants were gathered and chosen along with the risks and expectation for full agreement and consent for participation within the study. This chapter explained in detail the research design and how the data was gathered and analyzed with every effort taken to eliminate and minimize risk to the participants. This study has been conducted and approved by the IRB.

## CHAPTER FOUR: RESULTS

The purpose of this study was to examine the role of both externalized and internalized shame in somatic pain and symptoms. There were four research questions this study sought to address. First, does internalized shame predict somatic pain and symptoms? Secondly, does externalized shame predict somatic pain and symptoms? Third, does internalized shame predict a greater influence over somatic pain and symptoms than externalize shame? Lastly, does externalized shame influence the relationship between internalize shame and somatic pain and symptoms?

Data analysis was performed using IBM SPSS Statistics Version 25 with the PROCESS macro for SPSS (Hayes, 2017). Participants who did not complete all the items for any measure were excluded from the analysis. Bivariate correlations were completed between the TOSCA and the ESS measuring shame. Also, bivariate correlations calculated shame and outcomes related to somatic pain and symptoms. One model was tested. In the remainder of this chapter, results from these analyses are explored.

### Participant Demographics

Of the participants ( $N = 97$ ), 9.5% of participants were male and 90.7% were female (see Table 2 for demographic information). Participants' ages ranged from 18 to over 65 years of age ( $M = 28.96$ ,  $SD = 13.8$ ). The majority of the sample was Caucasian (93.8%) with 7.2 % describing their race as African American (1.0%), Latino (2.1%), and choosing "other" (3.1%). Regarding participants' highest reported level of education, the majority of participants (45.4%) endorsed having a bachelor's degree, while 25.8% reported a graduate degree or above, with the remaining 28.9% reporting other. The majority of participants (47.4%) selected full-time employment, while 15.5% chose part-time employed, 30.9% unemployed, and 6.2% reported

being a student. Most participants (77.4%) reported they were currently married or had a life partner. Other responses to current relationship status included currently single and never in a relationship (20.6%) and divorced (2.1%). The majority of participants reported no (63%) when asked if they struggled with a pervasive chronic pain that had not been medically diagnosed, while 35.1% reported yes. When the participants were asked if they had been to a physician for a full medical work up to identify a biological root to their illness, 46.4% reported yes, 25.8% reported no, and for the other 27.8% this question was not applicable. Of the participants, 42.3% reported spending 1 hour or less per week on treatment remedies or talking about their health-related symptoms, 28.9% reported spending 2-5 hours, 7.2% 5-10 hours a week, 2.1% spent 10-15 hours a week, and 19.6% reported this being non-applicable to them.

## **Data Analysis**

### **Research Question 1**

The first research question (Does internalized shame predict somatic pain and symptoms?) was analyzed using Pearson correlations (see Table 4). The analysis suggested a weak correlation between internalized shame and somatic pain and symptoms ( $r = .287, p < .004$ ). The results show a statistically significant relationship between internalized shame and somatic pain and symptoms and support the hypotheses 1a, that internalized shame does predict somatic pain and symptoms. This means internalized shame does reveal a relationship and influenced somatic pain or symptoms.

Table 2

## Participant Demographics

	<i>N</i> or Range	% or <i>M</i>
Age	18-65+	28.9
Gender		
Male	9	9.3
Female	88	90.7
Ethnicity		
Caucasian	91	93.8
African American	1	1.0
Latino	2	2.1
Other	3	3.1
Educational Background		
Undergraduate Degree	44	45.4
Graduate Degree	22	22.7
Post-graduate Degree	3	3.1
Other	28	29.9
Employment Status		
Unemployment	30	30.9
Part-time	15	15.5
Full-time	46	47.4
Students	6	6.2
Marital Status		
Single	16	16.5
Never Married	4	4.1
Married	73	75.3
Divorced	2	2.1
Cohabiting	2	2.1
Diagnosed Chronic Pain		
Yes	34	35.1
No	63	64.9
Identified Biological Root to Pain		
Yes	45	46.4
No	25	25.8
N/A	27	27.8
Time Spent on Symptom Treatment		
N/A	19	19.6
1 hour a week or less	41	42.3
2-5 hours a week	28	28.9
5-10 hours a week	7	7.2
10-15 hours a week	2	2.1

Table 3

*Descriptive Statistics of All Measures Used in this Study*

Measure	Minimum Score	Maximum Score	<i>M</i>	<i>SD</i>
ESS	1.24	3.48	2.75	0.66
TOSCA-Adol	14.00	54.00	34.68	8.26
PILL – 54 Somatic Pain and Symptoms	1.17	3.93	2.35	0.61

*Note.* TOSCA = Test of Self-Conscious Affect. ESS = Experience of Shame Scale. PILL-54 = Pennebaker Inventory of Limbic Linguistics.

**Research Question 2**

The second research question examined if externalized shame predicts somatic pain and symptoms. Pearson correlations were calculated to examine the relationship between externalized shame and somatic pain and symptoms. The results were statistically significant revealing the relationship between externalized shame and somatic pain and symptoms ( $r = .282$ ,  $p < .005$ ). See Table 4 for Pearson correlations and significance levels.

**Research Question 3**

The third research question examined if internalized shame predicted a greater influenced over somatic pain and symptoms than externalized shame. Multiple regression was used to predict somatic pain and symptoms from both internalized shame and externalized shame,  $R = .317$  and  $R^2 = .100$ . The adjusted  $R^2$  was  $.081$ . The overall results were statically significant ( $F = 5.238$ ,  $p < .007$ ). Variables for internalized shame and externalized shame were added to account for unique variance. However, after accounting for externalized shame (ESS), internalized shame (TOCSA-A) did not show a statistically significant variance. These results, as shown in Table 5, demonstrated externalized shame to have a stronger relationship to somatic pain and symptoms ( $p < .006$ ) than internalized shame ( $p < .623$ ); therefore, not supporting the

hypothesis that internalized shame would predict a stronger influence over somatic pain and symptoms than externalized shame.

#### **Research Question 4**

The fourth research question asked whether externalized shame influences the relationship between internalized shame and somatic pain and symptoms. This model (pictorial representation in Figure 3 and Figure 4) used internalized shame (TOSCA-A) as the predictor variable and somatic pain and symptoms (PILL-54) as the outcome variable. The proposed moderator for this model was externalized shame (ESS). The overall results found this model to be statistically significant,  $R=.404$  and  $R^2 = .163$ . However, while both of these constructs showed significance on their own, no interaction between TOSCA-A and ESS was found ( $t = -1.192, p < .236$ ) (see Table 5), and therefore the hypotheses 4 was not supported, revealing that externalized shame did not in fact influence the relationship between internalized shame and somatic pain and symptoms ( $F = 6.057, p < .001$ ).

To test the moderation model, Hayes' (2017) Conditional Process Analysis PROCESS macro for SPSS was used. Internalized shame and externalized shame scores were mean-centered prior to analysis because this made it easier to interpret the results (Dalal & Zickar, 2012) and made the regression coefficients more meaningful (Hayes, 2017). Also, mean-centering may make interpretation easier for the reader (Hayes, 2017). Bootstrapping resampling using 5,000 bootstrap samples was used.

Table 4

*Correlations between Internalized Shame, Externalized Shame and Somatic Pain and Symptoms.*

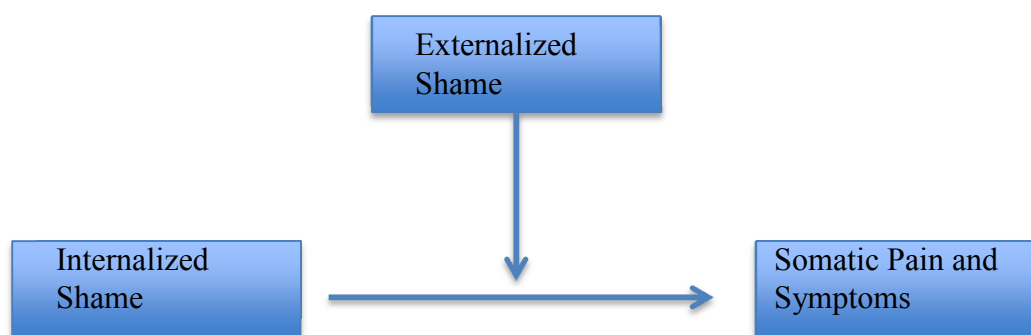
Scale	Somatic Pain and Symptoms Pearson Correlation Coefficient ( <i>r</i> )
TOSCA – Internalized shame	.287**
ESS – Externalized shame	.282**

*Note.* \*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 5

*Overall Model Summary*

	B	SE	t	p	LLCI	ULCI
TOSCA	.005	.009	.493	.623	-.014	.023
ESS	.313	.111	2.807	.006	.092	.534
Interaction	-.012	.010	-1.192	.236	-.032	.008



*Figure 3.* Hypothesized Theoretical Model One.

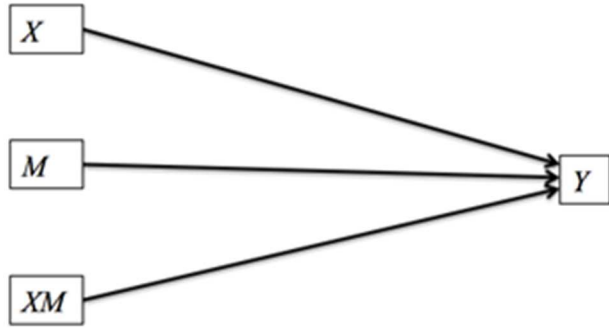


Figure 4. Hypothesized Statistical Model One.

### Summary

Overall, the model was statistically significant ( $F(2, 94) = 5.238, p < .007, R^2 = .163$ ). Internalized shame and eternalized shame were predictors of somatic pain and symptoms which is consistent with the correlational results and previous research. However externalized shame showed a stronger relationship to somatic pain and symptoms than internalized shame, a direct opposite to what was hypothesized. Lastly, when tested, the moderation model indication that no interaction between shame (internalized and externalized) and somatic symptoms was found. The confidence interval for the interaction based on 5,000 bootstrap samples included zero (-.032 to .008), indicating that no interaction exists.



## **CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

This chapter discusses the findings based on the following research questions that were investigated in this present study: a) Does internalized shame predict somatic pain and symptoms, b) Does externalized shame predict somatic pain and symptoms, c) Does internalized shame predict a greater influence over somatic pain and symptoms than externalized shame, and lastly, d) Does externalized shame influence the relationship between internalized shame and somatic pain and symptoms. This chapter includes a discussion of the findings of each of the research questions and the impact the findings have on current literature. Conclusions about the regression analysis and moderation model are discussed along with limitations, implications for practice, and future research.

### **Summary of Participants**

Participants were selected based on their response to an advertisement on social media (Facebook), their confirmation to being 18 years of age or older, and completion of the demographic questionnaire and the subsequent surveys: TOSCA-A (Tangney et al., 1989), ESS (Andrews et al., 2002), and the PILL-54 (Pennebaker, 1882). The only data included in this study was from the participants that completed the questionnaires in their entirety; all other data was discarded. Of the participants ( $N = 97$ ), 9.5% of participants was male, 90.7% was female. Participants' ages ranged from 18 to over 65 years of age. The majority of the sample was Caucasian (93.8%) with 7.2 % describing their race as African American (1.0%), Latino (2.1%), and choosing "other" (3.1%). The majority of participants reported no (63%) when asked if they struggled with a pervasive chronic pain that had not been medically diagnosed, while 35.1% reported yes. When the participants were asked if they had been to a physician for a full medical work up to identify a biological root to their illness, 46.4% reported yes, 25.8% reported no, and

for the other 27.8% this question was not applicable. Of the participants, 42.3% reported spending 1 hour or less on treatment remedies or talking about their health-related symptoms, 28.9% reported spending 2-5 hours, 7.2% 5-10 hours a week, 2.1% spend 10-15 hours a week, and 19.6% reported this being non-applicable to them.

## **Summary of Findings**

### **Research Question One**

The purpose of this study was to examine the relationship between two independent variables, internalized and externalized shame, and the dependent variable, somatic pain and symptoms. The first question evaluated if internalized shame predicted somatic pain and symptoms. A bivariate correlation was used to determine if there was any significant relationship between internalized shame and somatic pain and symptoms. This correlation was significant, thus supporting the hypothesis that internalized shame does have an influence over somatic pain and symptoms. These results are consistent with prior research done by Pilnes et al., (2006) as well as Candea and Szentiogita (2013) demonstrating the processes of shame in psychopathology specifically somatic pain and symptoms.

### **Research Question Two**

The second question evaluated if externalized shame predicts somatic pain and symptoms. A bivariate correlation was used to analyze the relationship between externalized shame and somatic pain and symptoms. This correlation was significant, thus supporting the hypothesis, demonstrating the relationship between externalized shame and somatic pain and symptoms. These results were also consistent with previous literature demonstrating the role of externalized shame in psychopathology (Candea & Szentagotai, 2013). While the study of

Candea and Szentagotai (2013) did not directly measure somatic pain and symptoms, it did show that shame over guilt was more associated with various aspects of psychopathology, which included somatic pain as a symptom. This current study used a cross-sectional design, whereas Candea and Szentagotai (2013) used a longitudinal study to evaluate the external and internal processes of shame. It may be proven advantageous to use a longitudinal study in future research to evaluate the relationship between shame and somatic pain and symptoms.

### **Research Question Three**

The third question asked if internalized shame predicted a greater influence over somatic pain and symptoms than externalized shame. Multiple regression was used to analyze if in fact internalized shame predicted a stronger influence over somatic pain and symptoms. Results showed that internalized shame did not have a greater influence over somatic pain and symptoms than externalized shame. Thus, the null hypothesis was supported. These results suggest that when it comes to predicting somatic pain and symptoms that externalized shame shows a stronger influence over somatic pain and symptoms than internalized shame.

Previous research done by Candea and Szentagotai (2010) and Tangney, Stuewig & Mashek (2007) found a correlating relationship between somatic pain and shame; however, their research did not evaluate the distinct feature of internalized and externalized shame. More research is needed in these areas to address and clarify the relationship between shame (internal and external) and somatic processes.

### **Research Question Four**

The fourth research question evaluated if externalized shame influences the relationship between internalized shame and somatic pain and symptoms. A moderation analysis was used. The results were insignificant in that no moderation effect was found. Again, the null hypothesis

was supported with the findings of this study. These results suggest that externalized shame does not influence the relationship between internalized shame and somatic pain and symptoms.

However, future research may suggest using externalized shame as a mediator, since externalized shame showed a stronger relationship to somatic pain and symptoms than internalized shame when analyzed and may provide valuable explanation to the relationship. Regardless, it is suggested, more research be done to distinguish the impact of shame on physical health (Black & Garbutt, 2002; Chilton, 2012; Dickerson et al., 2004). The main features of shame are its hiding nature and avoidant tendencies (Tangney, 1991; Tangney et al., 1996; Tangney et al., 2007).

Although this limitation was considered prior to conducting the study, it is possible since the shame measures asked participants to reflect back on their adolescents in answering the questions that accuracy of results were compromised. Another limitation to this study was the unforeseen timing response to the survey. Since only 95 participants were needed, the survey closed after just 38 hours of being available. It is possible the participants that responded promptly displayed lower levels of both shame and somatic pain. While speculation is at play, both shame and somatic pain display high levels of avoidant behavior which may not translate well into a quantitative format.

### **Limitations of this Study**

There are several limitations to this study that must be considered. First, this study used a cross-sectional design that required participants to rely on best memory when answering the shame-based questionnaires from their adolescences. A longitudinal study is recommended for future study to allow for more accurate information from the distinct time periods, present day and adolescences. Also, due to shame's hiding and avoidant behaviors, answering questionnaires may not be the best way to get a true reflection of one's experience with shame.

Using a qualitative study and interviewing style to evaluate (non-verbal) behavior along with the participants' verbal response may be a more accurate reflection of their shame experience.

Another limitation is this study used a sample in response to an advertisement on social media. This limited the participants to those who saw the advertisement and were able to complete the questionnaires in one sitting. If a participant started a questionnaire and took a small break, the computer would reset and the data was lost. There were 128 people who started taking the questionnaires and only 97 completed surveys. While the cause of incompleteness is not known, the data shows several participants dropping out after completing a series of questions. Future research could use an interviewing style to accumulate the data, so that those with physical challenges would be allowed more physical flexibility if need be.

### **Suggestions for Future Research**

Within the field of psychology, studies have sought to explore and describe the nature (emotional/psychological) of somatic symptoms, it has been with limited success as the demand for symptom management within the medical community continues to grow (Prince et al., 2004). The medical community, specifically primary care facilities, have spent millions of dollars providing treatment for this specific population (Schaefer et al., 2010). While psychological evaluations may be needed to provide further treatment and extended care, physicians are cautious to refer to mental health facilities for fear of causing further anguish to their clients, applying the stigma of mentally ill (Schaefer et al., 2010). This breakdown between the mental health and medical communities has caught the eye of researchers, and ways of bringing education and reducing the negative association is being explored. While the primary focus of this study was to evaluate the role of shame within somatic symptoms, there is an increasing

need to identify the various constructs to explain the avoidant behavior and the pervasive worry those with somatic pain experience.

Research suggests that those with somatization and high levels of experiential avoidance may have difficulty acknowledging any psychiatric symptoms and may be offended by the direct questions on the testing's measure. While this study was able to select a measure that did not directly address shame, future research would suggest a longitudinal model to eliminate this bias.

Somatic symptoms effects can be seen in multiple ethnicities and across the age span (APA, 2013). It is estimated about one third of all somatic symptoms are medically unexplainable (Prince et al., 2007). According to the global burden of disease, middle to lower income countries medical care focuses primarily on communicable disease, which excludes disorders and diseases such as somatization; thankfully, the United States does not fall within this category (Prince et al., 2007). Countries such as the United States are more interested in directing their research focus towards diseases that are non-communicable, but cause early death. While somatization has not been included in these extensive research studies, it is suggested future research should include it. Furthermore, a recent study shows that 9 out of 14 people battling depression also struggle with somatization (Prince et al., 2007). Although not fatal, somatization dramatically compromises one's quality of life and has taken the lead in healthcare costs relating to pain management. It is suggested that future research focus on exploring the developmental features of somatization to aid in symptom treatment and reducing healthcare costs.

### **Clinical Implications**

Although previous research has been able to differentiate the motivational difference between shame and guilt (Lewis, 1971), there is still a generally large misunderstanding when it

comes to identifying shame, regardless of one's level of education (Candea & Szentagotia, 2013). It is most interchangeably used with guilt and is often lost among other self-conscious emotions due to its hiding nature (Candea & Szentagotia, 2013). Since shame's central features are avoidance and concealing, it can often go overlooked, even within the context of psychotherapy. It is clear that shame plays a significant role in psychopathology; how and to what extent is an area that needs further exploration (Andrews et al., 2002; Haling et al., 2000; Lee et al., 2001).

Shame and somatic pain share a large common denominator: emotional avoidance. Emotional avoidance has been positively correlated with narcissism, anxiety disorders, depression, and somatic pain and symptoms (Hayes, 2004). Previous research demonstrated that emotional experiences mediate the pain response in the body; the stronger the emotional response, the stronger physical pain response (Dickerson & Kemeny, 2004; Prince et al., 2004).

The physical nature of somatic pain and symptoms often draw patients into primary care facilities; however, two thirds of those experiencing somatic pain and symptoms have a dual diagnosis of depression or an anxiety disorder (Prince et al., 2007). Those staggering numbers suggest that pharmaceutical efforts to manage depressed and anxious feelings may not be addressing the somatic pain that often accompanies them. Therapeutic efforts to manage somatic pain are limited as pharmaceutical use and symptom management is usually the first line of defense (Barsky et al., 2005; Schaefer et al., 2010). However, treatment centers are emerging that focus on both the physical pain and the emotional processes that contribute to the cycle of denial and help seeking behavior that those with somatic pain often displayed (Lumley et al., 2011).

While this particular study did not show a relationship directly between shame and somatic pain and symptoms, it is necessary that further research seek to understand the unique features that are driving these emotional experiences and exacerbating physical pain. Patients experiencing somatic pain and symptoms are increasing and the need for treatment measures to move beyond symptom relief is of necessary priority.

Increasing awareness among medical professionals and insurance companies may help them to more readily validate the need for holistic treatment and make attending pain treatment centers more accessible to those who experience chronic bodily pain (Martin, 2007; Pineles et al., 2006; Prince et. al., 2004). Nevertheless, attending a treatment center may not be the best option for some, and a traditional therapeutic environment can be another successful alternative to those seeking relief from somatic pain. Hayes (2004) has seen success using ACT. This therapy employs mindfulness techniques as thought processes are examined, evaluated, and accepted. This therapeutic process directly confronts the emotional avoidance and denial that in both shame and somatic symptoms and has shown to decrease physical pain and increase awareness and acceptance.

### **Implications for Counselor Education**

While shame and somatic symptoms greatly affect those suffering, more research is needed in the theoretical understanding and treatment of these two constructs on a professional level. When one experiences physical discomfort, seeking out psychotherapy is not typically the first course of action. However, research shows the physical pain response in the body is mediated through one's emotional experiences (Dickerson, & Kemeny, 2004; Prince et. al., 2004). This then places a large demand on the medical community to refer and educate their patients on the need and benefit of attending psychotherapy for furthering their treatment. While



this, in theory sounds feasible, there are oftentimes a breakdown between the medical profession and the therapeutic community. Physicians have expressed a hesitation to refer their clients, not wanting to label them as mentally ill (Lumley et al., 2011). While their primary focus is to evaluate and treat physical symptoms, one could suggest their concerns may reveal a lack of education and understanding of the benefits patients would receive from holistic (bio/psycho/social/spiritual) treatment. The therapeutic community has been growing in their understanding of somatic pain and symptoms, and treatments measured are and have been developed that show a decline in somatic pain when completed. Educating therapists on how to address and treat physical pain from an emotional perspective is a huge piece of the puzzle; the other continuing to build awareness within the medical community. Empowering both general practitioners and therapists to work together to address these issues will add it creating a holistic treatment experience for patients, with an overarching goal to increase overall wellbeing.

### **Summary**

This study sought to focus specifically on the unique cognitive and emotional features that shame contributes with those experiencing somatic features. While no interaction relationship between shame and somatic pain and symptoms was found, further exploration of the emotional contributions in somatization is needed to provide further understanding to aid to medical and psychological treatment development to affect long-term health and quality of life.

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## APPENDIX A: Advertisement

### Be a valuable part of research and help me Graduate!

My name is Heather M. Fritch, I am a PhD student at Liberty University. I am working on my final research project that looks at physical pain from an emotional lens. If even one of these symptoms describes you, please consider helping me by taking this series of surveys (approx. 30min-1hour) and make a valuable contribution to research.

[www.surverymonkey/heatherfritch.com](http://www.surverymonkey/heatherfritch.com)

All surveys are anonymous. If you would like to participate in a drawing, you may provide your email address. Your email address will be collected separately from the survey results to secure anonymity. One \$50 Amazon\* Gift Card will be awarded by random selection.

The advertisement features a background image of a person's hands typing on a laptop keyboard. The person is wearing a light-colored, patterned button-down shirt. The text is overlaid on the image in a clean, sans-serif font. The main headline is in yellow, and the list of symptoms and the call to action are in white.

**UNEXPLAINED PAIN?**

FATIGUE,  
HEADACHES,  
INDIGESTION,  
JOINT PAIN,  
INSOMNIA?

**PARTICIPATE IN A DOCTORAL RESEARCH STUDY**  
ENTER TO WIN \$50 AMAZON GIFT CARD

## APPENDIX B: Consent Form

The Liberty University Institutional  
Review Board has approved this document  
for use from 2/19/2018 to –  
Protocol # 3083.021918

### CONSENT FORM

Evaluating the Role of Shame in Somatic Pain and Symptoms  
Heather M. Fritch  
Liberty University  
School of Behavior Sciences

You are invited to be in a research study on shame and somatic pain. You were selected as a possible participant because you responded to an advertisement on social media (Facebook or Instagram) and have confirmed that you are 18 years of age or older. Please read this form and ask any questions you may have before agreeing to be in the study.

Heather Fritch, a doctoral candidate in the Department of Counselor Education & Family Studies/ School of Behavioral Sciences at Liberty University, is conducting this study.

**Background Information:** The purpose of this study is to evaluate the role that shame plays in somatic pain and symptoms.

**Procedures:** If you agree to be in this study, I would ask you to do the following things:  
1. Complete the following survey questions to your best ability (approximate time 30 minutes-1 hour)

**Risks:** The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life. However should you experience any emotional distress after completing the survey, it is recommended that you seek out professional counseling. You may contact the researcher of this study for possible recommendations.

**Benefits:** Participants should not expect to receive a direct benefit from taking part in this study.

**Compensation:** Participants will not be individually compensated for participating in this study. However, there is an option to participate in a raffle for a \$50 Amazon gift card. If you wish to participate, you will need to provide your email on the survey. All email addresses collected will be separated from the data by the survey platform and will not be linked to your results in any way. (This option is not available for those who live in Florida, as raffles are illegal in that state.)

**Confidentiality:** The records of this study will be kept private. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher, faculty chair, and statistics consultant will have access to the records.

- Data will be stored on a password locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

The Liberty University Institutional  
Review Board has approved this document  
for use from 2/19/2018 to –  
Protocol # 3083.021918

**Voluntary Nature of the Study:** Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**How to Withdraw from the Study:** If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

**Contacts and Questions:** The researcher conducting this study is Heather M. Fritch. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at hdeoer@liberty.edu. You may also contact the researcher's faculty advisor, Dr. John C. Thomas, at jthomas2@liberty.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

***Please notify the researcher if you would like a copy of this information for your records.***

**Statement of Consent:** I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH  
CURRENT DATES HAS BEEN ADDED TO THIS DOCUMENT.)

**APPENDIX C: Demographic Questionnaire: Background Information and Medical &  
Mental Health History**

**Biographical**

1. Age:

18-25  26-35  36-45  46-55  56- 65  65+

2. Gender:

Male  Female  Other

3. Ethnicity:

African American  Caucasian  Latino  Asian  Other

4. Years of college education:

Undergraduate  Graduate Degree  Post-graduate Degree  Other

5. Employment

Unemployed  Part-time  Full-time  Student

6. Annual Income

Under \$10,000  \$10,000-\$19,999  \$20,000-\$29,999  \$30,000-\$39,999  
 \$40,000-\$49,999  \$50,000-\$69,999  \$70,000-\$99,999  
 Over \$100,000

7. Current Marital Status

Single  Never Married  Married  Separated  Divorced  Cohabiting

**Medical History**

8. Have you ever been diagnosed by a medical or mental health professional as having a mood disorder such as depression, bipolar, or anxiety?

Yes  No

9. Are you struggling with pervasive, chronic pain that has not been medically diagnosed?

Yes  No

10. Have you been to a primary care physician for a full medical work up to identify any biological root of your symptoms?

Yes  No  N/A

11. Are you currently seeking treatment at one of the following:

Primary care (General practitioners)  Nutritionists  Chiropractor  
 Functional Medicine  Counseling/Therapy  N/A

12. How much time do you spend on treatment remedies, this includes dr. visits of all kinds, researching your health symptoms and/or talking to other about your health related symptoms?

One hour or less a week  2-5 Hours a week  5-10 Hours a week  
 10-15 hours a week  15-25 hours a week  25-40  40+  N/A

**APPENDIX D: Permission to use the TOSCA-A**

On May 12, 2016, Dr. June Tangney wrote:

Hello Heather,

You are more than welcome to use our measures, and it is fine to modify them to past tense. I am attaching the TOSCA-3 (our most recent measure of shame and guilt proneness for adults), the TOSCA-A (for adolescents), and scoring information for both versions. If you need another version (i.e., for children), please let us know. The TOSCA-A was designed for adolescents in grades 7-12, but we've also used it successfully with university students.

I have attached an article with information on the reliability and validity of the TOSCA-A; you can find information on the reliability and validity of the TOSCA-3, and a summary of our research in: Tangney, JP & Dearing, RL (2002). Shame and Guilt. NY: Guilford Press. The book is available through [www.guilford.com](http://www.guilford.com), [www.amazon.com](http://www.amazon.com), and in some university libraries.

Please do keep in touch and let us know how your research develops. I would be grateful for a summary of the results whenever they become available.

Best Wishes,  
June T.

June Tangney, Ph.D.  
University Professor  
and Professor of Psychology

George Mason University  
Department of Psychology  
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**APPENDIX E: Permission to use the ESS**

On May 25, 2016 Dr. Bernice Andrews wrote:

Dear Heather

Thank you for your message. I would be happy for you to modify the ESS along the lines suggested in the attached file. We have looked at past shame in other studies using interview measures of shame - though not so far with the self-report ESS measure (see attached pdf for an example). We have found that people can distinguish past from current shame feelings, but you probably need to ask for both time periods to concentrate their minds and help them make that distinction. You might also find the extra data valuable for your understanding of the issues. In the attached ESS modification I have modified the initial instructions and the first question. If this is along the lines you are happy with, then you would obviously need to do it for each question. Hope that helps

Bernice Andrews PhD FBPsS  
Emeritus Professor of Abnormal Psychology  
Royal Holloway University of London  
Egham, Surrey TW20 OEX, UK