Examining a Model of Self-Conscious Emotions: The Relationship of Physical Self-Perception and Shame and Guilt Proneness with Appraisals in the Experience of Body-Related Shame and Guilt

by

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Abstract

Self-conscious emotions such as shame and guilt are powerful emotions that can influence an individual's behaviours and cognitions in many daily activities. These emotions can function as motivators, resulting in increased effort or change of action to reduce or avoid feeling the emotion again. Although considerable research exists regarding self-conscious emotions, little has been done to examine these emotions in relation to the body (Sabiston, Brunet, Kowalski, Wilson, Mack, & Crocker, 2010). Using Tracy and Robins' (2004) model of self-conscious emotions, the purpose of this study was to examine (a) physical self-concept (PSC) and shame and guilt proneness as predictors of body-related shame and guilt and (b) the mediating role of specific attributions on the relationship in (a). Based on the model, it was hypothesized that shame would be related to stable, global, and uncontrollable attributions whereas guilt would be related to unstable, specific and controllable attributions. These attributions would mediate any effect of physical self-concept, shame proneness, and guilt proneness on body-related shame and guilt. Female participants (N = 284; Mean age = 20.6 ± 1.9 yrs) completed measures of PSC and shame and guilt proneness before reading a hypothetical scenario designed to elicit a negative body-related emotional response, followed by assessment of state shame and guilt and attributions. Shame proneness and PSC were significant predictors of body shame (β = .49; β = -.11) and guilt (β = .41; β = -.14). Control attributions mediated the relationship of PSC with shame and guilt and shame-proneness with body shame. Global attributions mediated the relationship of shame proneness with body shame. Control (β = -.16), stability (β = .16), and global (β = .20) attributions were significant predictors of body guilt, while global (β = .30) and control (β = -.19) attributions were significant predictors of body shame. The study provides partial support for Tracy and Robins' model for predicting shame, but little support for predicting guilt.

Preface

The Behavioural Research Ethics Board of the University of British Columbia granted ethics approval for this study on November 29th, 2010, certificate # H10-02225. A subsequent amendment was approved on February 17th, 2011.

This research was part of a multi-site SSHRC funded study examining self-conscious emotions and lifestyle behaviours spearheaded by Dr. Catherine M. Sabiston at McGill University. Participating researchers included: Dr. Peter R. E. Crocker, university of British Columbia; Dr. Kent C. Kowalski, University of Saskatchewan; Dr. Diane E. Mack and Dr. Phillip M. Wilson, Brock University.

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CHAPTER 1: INTRODUCTION

1.1 BODY-RELATED SHAME AND GUILT

Shame and guilt are two powerful self-conscious emotions that have been linked to a number of detrimental behavioural and cognitive consequences such as depression, disordered eating, social avoidance/phobia, in addition to interpersonal conflict and repair (Tracy & Robins, 2004). There has been limited investigation of these emotions in the sport and exercise domains, particularly in regards to the experience of shame and guilt in relation to the body (Sabiston, Brunet, Kowalski, Wilson, Mack, & Crocker, 2010). There are many reasons why women can feel body-related shame and guilt. The experience of shame typically involves a discrepancy of the person as a whole; women tend to experience body shame when their perception of their body does not match that of their ideal or expected body (McKinley, 1998), in addition to social comparison, and past teasing history in relation to the body (Markham, Thompson, & Bowling, 2005). Body-related guilt, on the other hand, often results from specific actions of the individual. Such actions may involve lack of physical activity, poor eating behaviours, and lack of effort or training (Brune, Gunnell, Bennett, Mosewich, Schellenberg, Crocker, & Sabiston, 2010; Thompson, Dinnel, & Dill, 2003).

Although sport and exercise psychology researchers have extensively studied specific emotions and affective states like anxiety and enjoyment (see Crocker, Kowalski, Hoar, & McDonough, 2004; Hanin, 2000), there has been limited research on self-conscious emotions like shame and guilt. Recently, Sabiston et al. (2010) examined body-related self-conscious emotions in relation to motivation for physical activity. Results showed that body-related shame had a significant and positive correlation with external and less autonomous motivation in

relation to physical activity, while body-related guilt had a positive and significant correlation with external and more autonomous motivation in relation to physical activity. In addition, recent investigation into the triggers, contexts, and behaviours in regards to body related shame and guilt experiences has identified some common themes in relation to these experiences. Brune et al. (2010) used content analysis to determine common themes regarding the self-reported body-related guilt experiences of over 300 university students. They found that experiences of guilt were largely triggered by eating and exercise behaviours, with other triggers including drinking behaviour, identity incongruence, downward comparison to others, athletic situations, and appearance. Cognitions were not largely reported, but those that were involved negative thoughts, rationalization, regret, lack of self-control, and desire to change. In terms of behaviours, participants reported avoidance, attempts to change behaviour, and seeking social support. Similarly, Schellenberg, Bennett, Brune, Gunnell, Mosewich, Crocker, and Sabiston, (2010) utilized the same technique to analyze nearly 600 participants' reports of shame. Experiences of shame were found to be triggered by: appearance, physical incompetence, negative self-judgements, negative social-judgements, and negative behaviours. Cognitions resulting from shame experiences included: avoidance, negative thoughts, emotion-focused coping, appraisal, and intention to change. Behaviours resulting from shame experiences included avoidance, attempts to change the self or the situation, seeking advice/social support, and displayed reaction. The results of this research identified overlap and commonalities in terms of the triggers, contexts, and cognitions associated with body shame and guilt.

As the aforementioned research has highlighted, self-conscious emotions seem to play an important role in people's experiences in sport and physical activity. However, many questions remain unanswered. In particular, what are the antecedents leading to body related shame and

guilt? The common triggers identified in the above studies provide some information but there were wide individual variation in the triggers identified. The research reported in this thesis utilized a theoretical model of self-conscious emotions (Tracy & Robins, 2004) as a framework to understand how relatively stable person attributes interact with context to generate specific cognitions (attributions) and the experience of either shame or guilt. The following sections will describe the relevant literature on self-conscious emotions and the Tracy and Robins (2004) model.

1.1.1 Justification

The current research is part of a SSHRC funded collaboration between University of British Columbia, McGill University, Brock University, and the University of Saskatchewan, spearheaded by Dr. Catherine Sabiston. During the first phase, university students were asked to recollect and detail experiences of shame, guilt and pride in relation to the body (see Brune et al., 2010, and Schellenberg et al., 2010). This exploratory research has garnered valuable information regarding the contexts, triggers, cognitions and behaviours involved in body-related shame and guilt experiences, but many uncertainties still remain. The primary aim of this thesis was to examine the specific underlying mechanisms behind experiences of shame and guilt in relation to the body by using a theoretical model of self-conscious emotions.

1.2 LITERATURE REVIEW

1.2.1 Emotions

Emotions are a central part of our everyday lives; they serve a multitude of purpose and can influence our behaviours across a variety of situations. According to Oatley and Jenkins (1992), emotions function within an individual in control of goal attainment, and between individuals to communicate intentions and mediate relationships. Lazarus (1999) argued that understanding emotions is a key to understanding how people adapted to their world. Emotions are present in all domains of our life, whether it be work, play, interpersonal relationships, or self-evaluation. Theorists argue that basic emotions, such as anger, happiness, sadness, and fear, can be linked to our survival and can play a central role in facilitating our social interactions (Ekman & Friesen, 1971; Lazarus, 1999; Oatley & Jenkins, 1992). For example, when we feel fear in a situation where our survival is threatened, a signal is sent to our body to prepare to flee or to stay and fight. When we feel anger or sadness, this can mediate our social relationships by signifying to our significant others that they have hurt us in some way, thereby prompting them to rectify the situation to repair the relationship. Recent work on self-conscious emotions such as shame, guilt and pride had indicated that they have important motivational functions (Covert, Tangney, Maddux & Heleno, 2003; Lewis, 1993; Sabiston et al., 2010). Clearly, understanding emotions may be a key to understanding human behaviour.

1.2.1.1 Characteristics of emotions

The emotions literature is complex and involves many controversial and ongoing debates about what constitutes an emotion, what are the basic emotions, what are self-conscious

emotions, classifications of different types of emotions, and how emotions differ from other affective experiences like moods (Ekman, 1992; Lewis, 1993: Tracy & Robins, 2004). It is difficult to find a definition of emotion that is acceptable to all emotion theorists and researchers alike (Vallerand & Blanchard, 2000). Contributing to this confusion is the tendency of researchers to use divergent terminology such as feeling states, affect, moods, and emotion interchangeably (Crocker, Hoar, McDonough, Kowalski, & Niefer, 2004; Vallerand & Reid, 1984). Gray and Watson (2001) defined emotions as being short term, focused, intense, infrequent, and as adaptive responses. In contrast, moods can be defined as long term, unfocused, less intense, pervasive, and as continuous responses (Gray & Watson, 2001). Affect tends to describe the state or characteristic of the mood or emotion (positive or negative) and can also describe an individuals' general disposition (Diener, Larsen, Levine, & Emmons, 1985; Watson, Clark, & Tellegen, 1988).

One possible way to differentiate emotions from other states such as moods is to identify the components of emotions. Emotions are thought to have the following characteristics: quick onset, common cognitive appraisal antecedents, distinctive physiological or neurological patterns, distinctive subjective feeling states, and distinctive facial or bodily expression (Cornelius, 1996; Lazarus, 1991). Lazarus (1991) has also argued that each emotion is associated with an action tendency or impulse, although these are regulated to an extent by social and cultural factors. Let's take the example of anger. Anger involves a strong sense of displeasure (subjective state), high physiological arousal, an impulse to strike at a target, and a facial expression involving furrowed eyebrows and baring of teeth. It is triggered primarily by the appraisal that the offending person has committed a social or moral offense. Recognizing that emotion should have key components has important implications for studying emotions in sport

and exercise psychology. In particular, if emotions are elicited by specific cognitive appraisals, then it should be possible to identify person factors that will trigger specific emotions in particular social situations.

1.2.1.2. Emotions in sport and exercise

Researchers in sport and exercise have recognized that emotional experiences influence performance, health, social relationships, and motivation (Crocker et al., 2004; Hanin, 2000; Vallerand & Blanchard, 2000; Weiss & Williams, 2004). Much of the literature surrounding emotion in sport deals with anxiety and its effect on performance (Hanin, 2000; Hardy, 1990; Kleine, 1990). In terms of the body, researchers have primarily looked at social physique anxiety (SPA), which has been defined as the anxiety individuals experience in response to others' evaluation of their physique (Hart, Leary & Rejeski, 1989). SPA has been shown to alter the frequency, type and setting of physical activity (Brewer, Diehl, Cornelius, Joshua & Van Raalte, 2004), as well as exhibiting a positive correlation with shame and guilt (Thompson, Dinnel & Dill, 2002). Over the last decade, sport and exercise researchers have shown increased interest in other emotions such as anger, shame, and guilt (Gill & Williams, 2008; Sabiston et al., 2010; Vallerand & Blanchard, 2000).

1.2.2 Self-conscious emotions

Self-conscious emotions, such as shame, guilt and pride, are a distinct set of emotions that influence many of the components of our everyday lives (Campos, 1995; Fischer and Tangney, 1995). Self-conscious emotions are predominantly concerned with the self and specifically in relation to social motivations (Lewis, 1993). Self-conscious emotions are central

in relation to self-evaluations in terms of standards, goals, and rules, those dictated by our culture

and society, as well as those we impose on and hold for ourselves (Lewis, 1993). For example,

embarrassment occurs when we feel we are viewed unfavourably in public (walking around with

toilet paper on your shoe), shame results when we fail to attain personal goals or goals that

significant others hold for us, guilt occurs upon breaking a moral or social code (e.g., lying, poor

eating habits), and pride results from a sense of achievement (Keltner & Buswell, 1996;

Tangney, Miller, Flicker, & Barlow, 1996).

1.2.2.1. Characteristics of self-conscious emotions

While self-conscious emotions and other basic emotions do have much in common,

research has shown that they can also be quite divergent. According to Tracy et al., (2007) there

are five main distinctions between self-conscious emotions and basic emotions. First, self-

conscious emotions require self-awareness and self-representation. While basic emotions can

occur with self-evaluative processes, self-evaluation is an integral factor in the elicitation of self-

conscious emotions and therefore cannot occur in its absence. Second, self-conscious emotions

emerge later in life. Basic emotions develop during the first year of life; however, due to the

necessitation of self-awareness, self-conscious emotions generally do not develop until the third

year of life (Lewis, 1993). Third, self-conscious emotions primarily assist in the attainment of

social goals. While basic emotions also play a part in our social relationships, they also serve

other purposes (survival), while self-conscious emotions are specifically focused on the social

realm. Fourth, self-conscious emotions do not have distinct and universally recognized facial

expressions. While basic emotions have been shown to be accompanied by distinct and

universally recognized facial expressions, no such evidence exists in relation to the self-

conscious emotions. Fifth, self-conscious emotions require complex cognitive processing. The elicitation of self-conscious emotions involves complex cognitive processes in relation to the self and the event while the processes that evoke basic emotions tend to be more automatic in nature.

1.2.2.2. Distinctness of the self-conscious emotions

While it is clear that self-conscious emotions are unique and distinct from basic emotions, it has been unclear whether self-conscious emotions are distinct from each other. One of the main difficulties in distinguishing between the self-conscious emotions is their tendency to co-occur and overlap (Keltner & Buswell, 1996). In examining the distinctness of self-conscious emotions, specifically shame, guilt and embarrassment, Tangney et al. (1996) found evidence that these emotions do have divergent antecedents and contexts. For example, the social setting for embarrassment differs from shame and guilt in terms of the audience present, with embarrassment generally involving a larger audience than either shame or guilt, while no significant difference was found between shame and guilt in relation to audience size. Shame is a more intensely felt and painful emotion than either guilt or embarrassment, while embarrassment is the least intensely felt emotion of the three emotions studied, and it is also more fleeting. Embarrassment involved fewer moral transgressions than either shame or guilt, and embarrassment also involved less self-directed anger than either shame or guilt.

Additional support for the distinctness among self-conscious emotions was found by Keltner & Buswell (1996). The authors coded the recalled antecedents of participant experiences of shame, guilt and embarrassment using a 45 category scale of antecedents developed from empirical evidence. It was found that aside from a slight overlap, namely that poor performance was the most frequently recalled antecedent for both embarrassment and shame, and that hurting

others was a common antecedent of both shame and guilt, the antecedents which elicit the three emotions are otherwise distinct. The common antecedents for embarrassment primarily involved public interaction and included: physical mishaps (tripping), cognitive limitations (forgetting a name), loss of control over the body (burping), physical appearance mishaps (wearing your shirt inside out). Shame was primarily elicited by situations involving personal standards, such as; poor performance (mainly academic), causing emotional pain in others, failing to live up to the expectations of others, and disappointment in oneself (mainly involving failure to meet goals). The main antecedents for guilt involved causing harm to others and included: failure at duties, lying, neglecting another, and breaking a diet or exercise regime.

Similar results were found by Brune et al. (2010) and Schellenberg et al. (2010) in examining the contexts of shame and guilt elicitation in relation to the body. Body-related guilt has been shown to be triggered by eating and exercise behaviour, drinking behaviour, identity incongruence, and appearance (Brune et al., 2010). The common triggers of body shame include negative self-judgement, negative social-judgement, appearance, and physical incompetence (Schellenberg et al., 2010). Although there were distinct triggers identified for shame and guilt, it was also noted that there was considerable overlap among the triggers which elicited both body-related shame and guilt. Considering the tendency for the emotions of shame and guilt to co-occur and overlap (Keltner & Buswell, 1996), it is not surprising that there is some commonality as to the triggers which elicit these emotions.

1.2.3 A theoretical model of self-conscious emotions

Tracy and Robins (2004) developed a theoretical model of self-conscious emotions that identifies key antecedents and consequences of specific self-conscious emotions (see figure 1.1).

The model was developed using information from the existing literature based both on the distinctions between self-conscious emotions and basic emotions, as well as the diversity among the self-conscious emotions themselves. Tracy and Robins devised 10 predictions which make up the basis for the components of their model. Their first prediction is that if an event is appraised as relevant to survival goals, then a basic emotion will result, but not self-conscious emotions. The model holds that basic emotions (such as anger and fear) require less complex cognitive processing and do not necessarily require a focus on the self (Tracy & Robins, 2007). Thus the second prediction holds that self-conscious emotions require the focus of attention to be directed towards the self, thereby activating self-representations. According to Tracy and Robins (2004), self-representations are an integral component in the elicitation of self-conscious emotions. The authors state that an individual's self-representations may be actual self-representations, ideal representations that they hold for themselves, or ought representations which the individual feels a significant other holds for them. In order for self-conscious emotion to occur, the event must activate these self-representations, either directly or indirectly. For instance, if an individuals' ideal self-representation is to be fit, but if they drop out of their exercise regimen, then they are likely to experience a self-conscious emotion. The third and fourth predictions revolve around identity goals. Self-conscious emotions require that the event must be relevant to identity goals. We all have goals related to our identity, primarily related to maintaining who we see ourselves to be as individuals, or who we would like ourselves to be. Prediction number four states that positive self-conscious emotions result from identity goal congruence while negative self-conscious emotions are the consequence of identity goal incongruence. For instance, if an individual considers him/herself to be a healthy eater (self-representation), then this is part of his/her identity and he/she will often strive to sustain this

identity. An event such as overeating junk food (a direct challenge to their identity goal) will

elicit a negative self-conscious emotion. Self-discrepancy theory (Higgins, 1987) lends

credibility to predictions three and four. Higgins' 1987 study found that a discrepancy between

our views of who we are and who we (or significant others) would like ourselves to be, will

result in negative emotions.
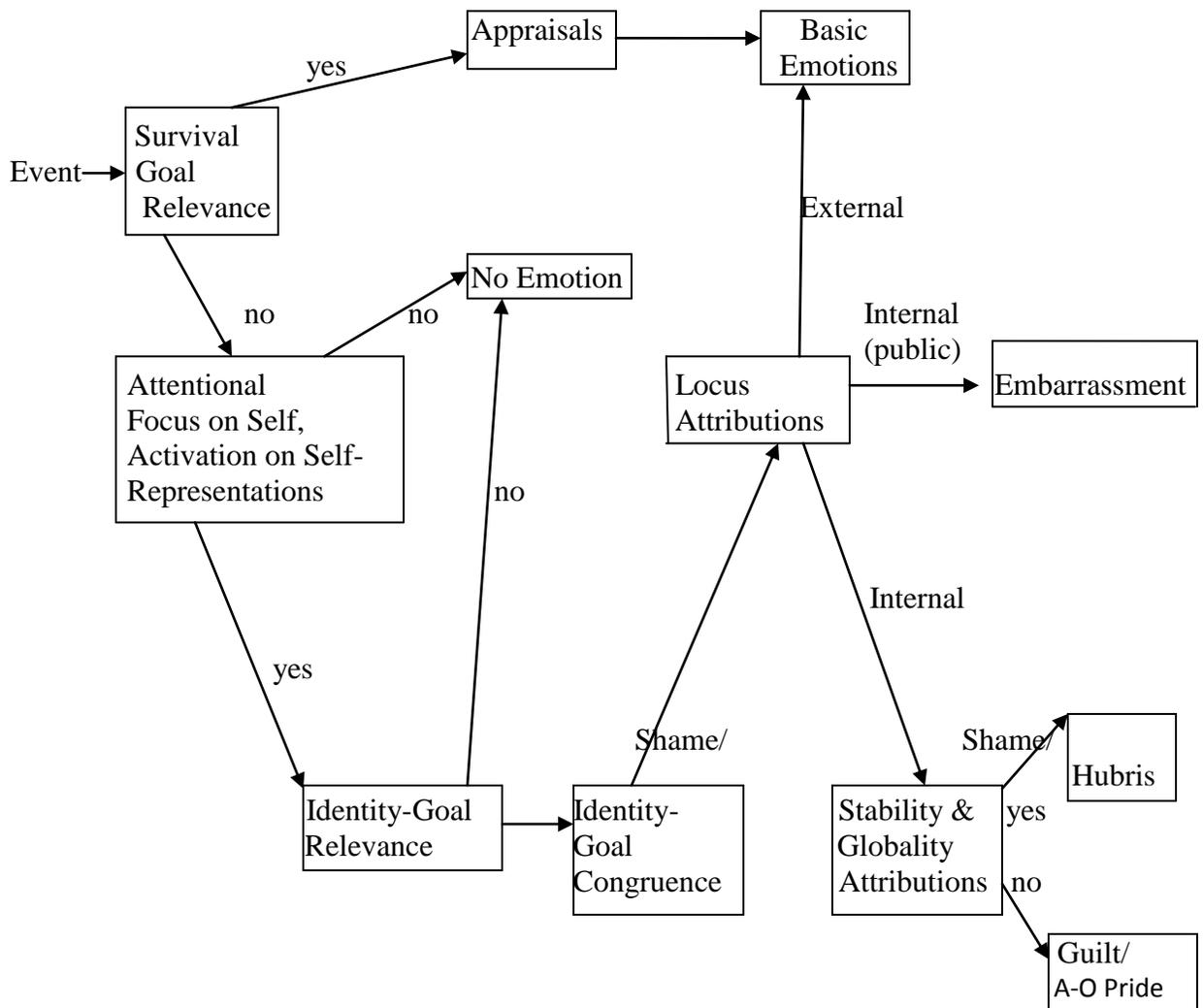
Figure 1.1: A theoretical model of self-conscious emotions (Tracy & Robins, 2004).

The remaining predictions are related to the types of attributional appraisals, Tracy and Robins predict that specific attributions will result in specific self-conscious emotions. For instance, shame will be attributed to internal, stable, and global causes while guilt will be attributed to internal, unstable, and specific causes. Attributions have been used to explain why particular behaviours occurred, thereby enhancing the ability to predict and control events in the future (Anderson & Riger, 1991). Attribution theory (Weiner, 1979, 1985) has been widely used as a means to explain/predict behaviours/outcomes in the achievement, emotion and motivation domains. Weiner identified three main dimensions of attribution: locus of causality (internal or external), stability (stable or unstable), and controllability (controllable or uncontrollable). Abramson and colleagues (Metalsky & Abramson, 1981; Seligman, Abramson, Semmel, & Von Baeyer, 1979) have postulated that certain individuals are prone to an attributional style. This theory suggests that some individuals are predisposed to a more or less consistent attributional style regardless of the situation or context. Abramson, Seligman, & Teasdale (1978) proposed that three attributional dimensions are factors in depression and learned helplessness: internal-external, stable-unstable, and global-specific. Abramson and colleagues suggest that lack of control and internal attributions will result in low self-esteem, lack of control and stable attributions will result in helplessness deficits longitudinally, and lack of control coupled with global attributions will result in helplessness deficits across a broad range of situations (Seligman, Abramson, Semmel, & Von Baeyer, 1979).

Coffee and Rees (2008) recently developed the controllability, stability, globality, universality (CSGU) attribution scale for use in the sport domain which builds on both Weiner's and Abramson and colleagues' work, and also responds to the call for a more widespread theoretical approach to measuring attributions (Rees, Ingledew, & Hardy, 2005). Similar to

Weiner's attribution scale, the CSGU scale includes measures of controllability and stability, but does away with locus of causality (internal or external) by assessing perceived personal control. The CSGU incorporates the notions of globality (the cause affects a wide range of situations that the person faces) and universality (the cause is common to all or most people) in an effort to evaluate the generalizability of the event. The CSGU also allows for the measurement of key concepts in Tracy & Robin's (2004) theoretical model (see figure 1.1).

In their theoretical model, Tracy and Robins hypothesize that self-conscious emotions require attributions to internal causes, whereas basic emotions do not. For self-conscious emotions to occur, the individual must appraise the cause of the event as something inside of them, rather than from the external environment, however, the cause need not be intentional. Predictions 6-10 are concerned with the attributions of stability and globality, namely that specific self-conscious emotions will be elicited by varying attributions regarding stability and globality. The authors predict that stable, global attributions will result in shame (prediction #6). For instance, if an individual has a consistent pattern of unhealthy eating, they would feel shame if they attribute the cause to something stable in their personality and beyond their control such as lack of control/willpower. Prediction #7 states that unstable and specific (rather than global) attributions result in guilt. For instance an individual will feel guilt if they drop out of their current exercise routine if the reason is attributed to something they can control such as lack of effort. Embarrassment does not require attributions to globality and stability, but the cause must be internal and relevant to identity goal congruence (prediction #8). For example, if an individual perceives themselves as physically fit, they may feel embarrassment upon failing an athletic challenge. Stable and global attributions of the self (such as attributing physical fitness to ability)

result in hubristic pride (prediction #9), and finally, authentic pride results from unstable and specific attributions of the self (such as attributing physical fitness to effort) (prediction #10).

In an effort to test their predictions and provide support for their model, Tracy and Robins conducted a series of four studies. Results from these studies have provided support for predictions 5-10 in addition to determining that controllability is also a factor in the elicitation of self-conscious emotions. Specifically, the results showed that internal attributions lead to a greater number of self-conscious emotions and fewer non-self-conscious emotions in comparison to external attributions. Furthermore, all four studies showed that shame showed a positive and significant relationship to uncontrollable and stable attributions, whereas guilt was positively and significantly related to attributions that were unstable and controllable.

1.2.4 Shame and guilt

As the current research is concentrating specifically on shame and guilt, from here on in I will narrow my focus to these particular emotions. Shame and guilt are perhaps the most widely studied of the self-conscious emotions, likely due to the intensity with which these emotions are felt (Tangney et al., 1996). While shame and guilt can both be painful experiences, shame is the more devastating emotion (Lewis, 1993; Tangney, Wagner, Fletcher & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall & Gramzow, 1996). Shame has been shown to result from attributions regarding the global self, in comparison to guilt which results from attributions regarding actions of the self (Tracy & Robins, 2004). The occurrence of shame can be so painful that the individual can lose the ability to speak, their behaviour is disrupted, and they feel a desperate need to hide and disappear (Lewis, 1993; Tracy & Robins, 2004). Guilt tends to arise from specific actions of the self rather than stable factors (as with shame). Considering this, the

emotion of guilt tends to be less painful than shame, does not result in a disruption of behaviour, and usually results in immediate attempts to rectify the situation (Lewis, 1993).

Considerable debate exists among the self-conscious emotion literature in regards to whether or not shame and guilt are elicited by distinct contexts or events. Much of the literature has focused on the notion that shame is a public emotion and more often than not occurs in a public context, whereas guilt is the more private of the two emotions (Lewis, 1993; Smith, Webster, Parrott & Eyre, 2002; Tangney, Flicker, Miller, & Barlow, 1996). However the empirical evidence indicates a more complex relationship. A 2004 study by Tangney, Marschall, Rosenburg, Barlow & Wagner found evidence to suggest that shame can occur in private situations as well as public. Analyses of children and adults' narratives of personal shame and guilt accounts revealed that both shame and guilt were equally likely to be experienced in the presence of others, and a substantial number of participants reported solitary shame experiences. In fact, solitary shame experiences were found to be almost as common as solitary guilt experiences. Further support for these results was found in a 1996 study by Tangney et al., which looked at the narrative accounts of adults' personal shame, guilt and embarrassment experiences. Results showed no evidence that shame is a more public emotion than guilt. In contrast, this study found that shame was slightly (18.2%) more likely than guilt (10.4%) to occur in a solitary context.

There is increasing empirical evidence to demonstrate that self-conscious emotions can emerge through an array of divergent circumstances and events. For example, analyses of personal narrative accounts of shame and guilt experiences by both children and adults showed that moral events, (lying, cheating, stealing, failing to help another, and disobeying parents) were cited by some as inducing feelings of shame while in others these events evoked feelings of guilt.

It was also found that nonmoral failure and shortcomings could possibly be more likely to elicit shame than guilt, although a number of these types of events also resulted in the experience of guilt according to a number of respondents (Tangney, 1992a; Tangney et. al., 1994). A 2006 study by Tracy and Robins investigated the context associated with shame and guilt. The researchers used content analysis to assess the appraisals of the participants' reports of shame and guilt experiences, which were coded according to type of event which elicited the emotion. Results showed that the main events which evoked shame or guilt included: relationships (including romantic and familial) (36%), personal (involving personal goals or morals, failure of an identity/self-goal) (30%), familial (22%), and achievement (school, work, grades) (12%). In contrasting shame and guilt, it was revealed that the two most common shame eliciting events were achievement (16% for shame vs. 7% for guilt), and personal events (40% for shame vs. 21% for guilt). The results of the preceding studies demonstrate that shame and guilt can occur from a variety of different circumstances and events, and that certain contexts regarding the elicitation of shame and guilt have been identified.

1.2.4.1 Body-related shame and guilt

As shame is found to be central in social interactions, and related to personal and societal standards, rules and goals (Lewis, 1993), it comes as no surprise that common triggers of body shame include negative self-judgement, negative social-judgement, appearance, and physical incompetence (Schellenberg et al., 2010). Body-related guilt has been shown to be triggered by eating and exercise behaviour, drinking behaviour, identity incongruence, and appearance (Brune et al., 2010). In addition, Schellenberg et al, (2010) and Brune et al, (2010) found that there was considerable overlap among the triggers, contexts, and events which elicited

body-related shame and guilt. The preceding findings are consistent with those of Tangney and colleagues (1992; 1994) and Tracy and Robins (2004) in that shame and guilt are equally as likely to be elicited by nonmoral failures and shortcomings, and that it is the appraisal of the event rather than the event itself which is perhaps more influential in eliciting the emotion.

As feelings of guilt generally involve attributions to internal, specific, unstable, controllable factors (such as specific actions and effort) and result in reparative behaviour (Lewis, 1993), the emotion is alleviated by a change in behaviour. For instance, if we feel guilty for not sticking with our exercise regime, we can assuage our guilt by getting back into our exercise routine and planning strategies to ensure we adhere to it. In this way guilt (or the desire to avoid feeling guilt) can serve as a motivator to stick to our routine. As shame results from attributions to the self as a whole (global) and results in avoidance and the feeling of wanting to hide (Tracy & Robins, 2004), it is much harder to alleviate the emotion and it tends to be more enduring (Tangney, Wagner & Gramzow, 1992). Therefore, shame in relation to the body has the potential to be a devastating experience and can result in maladaptive behaviour. For instance, Noll and Fredrickson (1998) found that body shame acts as a mediator between self-objectification and disordered eating. In addition, Burney and Irwin (2000) found that feelings of shame and guilt in regards to eating habits were both predictors in eating disorder behaviour; however, body shame showed the strongest causal link to disordered eating.

In addition to impacting eating behaviour, body-related shame and guilt can also be an influential factor in motivating physical activity as well as physical activity behaviour. Sabiston and colleagues (2010) explored the relationship of body-related self-conscious emotions (shame, pride, and guilt) with the motivation for physical activity in a female population. Results from the study showed that body-related guilt-free shame has a significant and positive correlation

with external and introjected regulation in relation to physical activity, neither of which was significantly related to physical activity behaviour. Shame-free guilt had a positive and significant correlation with external, introjected, and identified motivation in relation to physical activity, and identified motivation shared a positive significant relationship with physical activity behaviour. The preceding research indicates that body-related shame and guilt can influence behaviour, in addition to contributing to destructive behaviours and thought patterns.

1.2.4.2 Body-related shame and guilt in women

Today, women are under increasing societal pressure to be thin and toned, and media influence is thought to play a significant role in women's dissatisfaction with their bodies (Tiggemann & Pickering, 1996). Media portrayed images of the female body have become increasingly thin (Andrist, 2003), resulting in a culturalized ideal that's relatively impossible for the average woman to achieve. Body shame occurs when an individual compares their perceived self to an idealized self and come up short (Darwin, 1965; M. Lewis, 1993). Constantly being exposed to images of seemingly perfect and impossibly thin female bodies can inevitably result in negative feelings and attitudes towards one's body (Andrist, 2003). For instance; Monro and Huon, (2005) found that exposure to advertisements (both body-related and non-body-related) containing images of idealized bodies resulted in an increase in body shame among women.

Bessenoff and Snow (2006) examined whether body shame is influenced by comparing one's body to the cultural standard, (ASO: actual/societal ought) or from comparison to a personal ideal that is possibly an internalization of the cultural standard, (AI: actual/own ideal). The authors predicted that in order to experience body shame, one has to have internalized the cultural standard. Failing to meet the cultural standard is not enough to elicit body shame; one

must take on this cultural ideal as their own before body shame emerges. Results showed that both AI and ASO self-discrepancies were significantly related to body shame. In line with the authors' predictions, it was observed that self-discrepancy in AI mediates the relationship between ASO self-discrepancy and internalized body shame. A significant relationship was found between cultural standards and personal body ideals which revealed that the thinner an individual perceives the cultural standard to be, the thinner, in turn, is their own personal body ideal. A significant relationship was also found between both personal body ideals and perceptions of the cultural standard in relation to body shame. Overall, the studies indicate that women's body image is largely influenced by societal standards (Andrist, 2003; Bessenoff & Snow, 2006). If one's perception of their body fails to live up to these high standards, feelings of shame and/or guilt result. While these standards are largely imposed by society, body image discrepancy can also result from comparison to peers, as well as one's own individual standard (Bessenoff & Snow, 2006; Lin & Kulik, 2002; Noles, Cash & Winstead, 1985). The preceding research has provided insight into the processes leading to the experience of body shame and guilt, although less is known about the relationship of attributions to these emotions in relation to the body.

1.2.5 The working research model

The current study utilized an adapted form (see figure 1.2) of the theoretical model of self-conscious emotions developed by Tracy and Robins (2004). This adapted model was developed to examine the interrelationship among physical self-perception, shame and guilt proneness, attributions, and the experience of body-related shame and guilt. Empirical evidence shows that shame results from internal, stable, global, and uncontrollable attributions while

specific, internal, unstable, and controllable attributions lead to guilt (Lewis, 1993; Tracy & Robins, 2006). But less is known about how more stable person factors influence both the appraisal (attribution) process and experience of shame and guilt. This model was designed using the information gathered from existing empirical research, with the intention of examining these processes in hopes of providing some insight into the relationships among these factors.
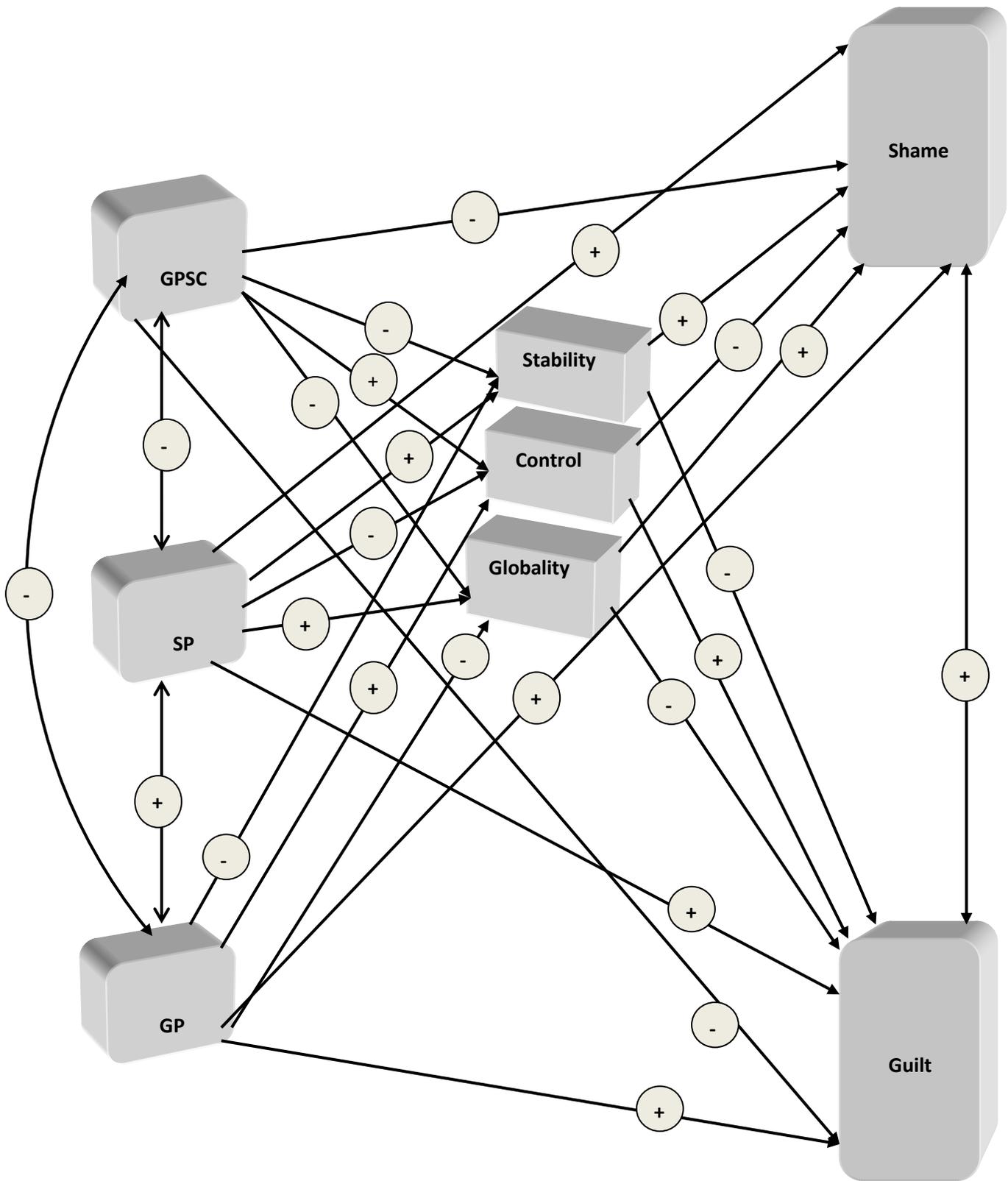
Figure 1.2: The proposed research model of self-conscious emotions with expected relationships (adapted from Tracy & Robins, 2004). GPSC = global physical self-concept, SP = shame proneness, GP = guilt proneness.

1.2.6 The physical self

Humans are all unique individuals; we all have our own likes and dislikes, hobbies and habits, and personality traits which contribute to our identity. Our identity consists of things we associate with, as well as things we do not associate with, in addition to groups, individuals, and activities we relate to (Owens, 2003). The concept of identity is complex and multifaceted. For example, one has a personal identity, which is emphasized by uniqueness and encompasses personal rather than group goals (Stets & Burke, 2003). There is also social/role identity, which moves away from uniqueness towards belonging. Here the individual identifies with a particular social group (political affiliation, religious affiliation) or role (politician, teacher, philanthropist, humanitarian) (Stets & Burke, 2003). Identity, in turn, is encompassed within the broader categorization of the self. The self can be defined as "a set of cognitive representations reflecting a person's personality traits, organized by linkages, across representations created by personal experience or biography" (Owens, 2003, pp. 206). Dimensions of the self can include scholastic, social, cultural, behavioural, physical, and emotional (Triandis, 1989). Factors such as these, which are also part of our identity, serve to comprise the more global notion of the self (Harter, 1990; Owens, 2003; Stets & Burke, 2003).

1.2.6.1 The physical self and identity

Much of our identity is also tied up in our physical selves. How people view their physical selves may impact a number of their cognitions and behaviours, as our physical self is the foremost manner in which we are socially appraised (Fox, 2000; Harter, 1999). We often judge new acquaintances by their outward appearance, if they're attractive or not, fat or thin, fit or unfit. If an individual feels they are overweight, chances are they will not be too comfortable

putting on a bathing suit and going to the beach, and if one sees themselves as unfit, they may feel apprehension at joining a gym. In this way, our physical self-perception can influence our behaviour. For instance, empirical evidence has shown that physical self-perception reliably predicts exercise behaviour (see Crocker, Kowalski, & Kowalski, 2001; Fox & Corbin, 1989; Marsh, 1996; Marsh & Redmayne, 1994; Sonstroem & Morgan, 1989). Boyd, Weinmann, & Yin (2002) found that among a female undergraduate population who exercised, high self-perception of sports competence, physical condition, and physical strength were positively correlated with factors associated with intrinsic motivation, which has been positively correlated with activity behaviour. In addition, a desire to change weight was associated with dieting behaviour, as well as a tendency to exercise for external reasons such as weight control and attractiveness. In addition, Canpolat, Orsel, Akdemir, & Ozbay (2005) found a significant correlation between physical self-perception and weight control in an adolescent female population. In studying physical self-perception among dieting and non-dieting female participants, the authors found that participants who never dieted had significantly higher scores on measures of global self-worth and physical appearance in comparison to participants who reported dieting behaviour. Given the results of the aforementioned research, one's perception of their physical self-concept has the capacity to influence important lifestyle behaviours.

1.2.6.2 The physical self as a multidimensional construct

A challenge in investigating physical self-perception is that it is a multidimensional construct, with many theorists proposing that it is comprised of multiple components (Fox & Corbin, 1989; Marsh, Richards, Johnson, Roche & Tremayne, 1994; Shavelson, Hubner & Stanton, 1976). Shavelson et al, (1976) were among the first researchers to propose a

multidimensional and hierarchical model for physical self-concept in a hierarchical model of global self-concept. The authors propose that general self-concept is at the top of the apex, with academic, social, emotional, and physical self-concept comprising the level directly below. The bottom level is comprised of various constructs which contribute to the preceding levels. For instance, the academic construct is comprised of English, History, Math and Science while peers and significant others contribute to the social construct. The authors propose that physical self-concept is comprised of physical activity and physical appearance.

Based on Shavelson et al.'s (1976) model, Fox and Corbin (1989) developed the physical self-perception profile (PSPP) utilizing the multidimensional concept. Fox and Corbin theorize that physical self-concept is hierarchical, with global self-concept at the apex, followed by physical self-worth directly below at the domain level. Below physical self-worth are physical condition, sports competence, physical attractiveness, and physical strength at the subdomain level. The preceding four components are on the same dimension, and together contribute to physical self-worth, which in turn contributes to global self-concept.

Citing the need for a more specific measure of physical self-perception, Marsh (1994) developed the physical self-description questionnaire (PSDQ). The PSDQ relies primarily on the measurement of constructs in the physical domain, rather than incorporating other factors (academic, social, emotional) to achieve a measure of global physical self-worth, rather than a broader measure of global self-concept as with Salveston et al.'s (1976) model or Fox and Corbin's (1989) model. The PSDQ measures eleven constructs, ten of which focus on the physical domain including health, physical activity, coordination, appearance, body fat, flexibility, endurance, strength, sport competence, and global physical self-concept, with the final subscale assessing overall esteem.

1.2.6.3 The influence of the physical self on behaviour and emotion

In addition to influencing dieting and exercise behaviour, physical self-perception has been linked to affective states such as social physique anxiety (Brewer, Diehl, Cornelius, Joshua, & Van Raalte, 2004; Kowalski, Crocker, & Kowalski, 2001; Russell, 2002; Russell & Cox, 2003). Social physique anxiety (SPA) has been defined as the anxiety an individual feels in response to public evaluation of their physique (Hart, Leary, & Rejeski, 1989). Research has shown that changes in physical self-perception are correlated with changes in social physique anxiety (Crocker, Sabiston, Forrestor, Kowalski, Kowalski, & McDonough, 2003; Kowalski, Crocker, & Kowalski, 2001; Lindwall & Lindgren, 2005). In examining the relationship among physical self, physical activity, and social physique anxiety, Kowalski and colleagues (2001) found that social physique anxiety shared a low to moderate relationship with the condition, sport, and strength subscales of the physical self-perception profile (PSPP) (Fox & Corbin, 1989). A strong relationship was found, however, among social physique anxiety and the physical self-worth and body appearance subscales of the PSPP. Similarly, in examining the relationship among physical activity, dietary restraint, social physique anxiety, and physical self-perceptions, Crocker and colleagues (2003) found that changes in social physique anxiety were associated with changes in all measures of self-perception, but not BMI (body-mass index). Finally, in examining results of a 6-month exercise intervention, Lindwall and Lindgren (2005) found that changes in social physique anxiety were associated with changes in physical self-perception as measured with the physical self-perception profile (PSPP, Fox & Corbin, 1989).

Self-representation and self-awareness are integral components of physical self-perception. Tracy and Robins' (2004) model identifies self-representations and identity goal processes as significant antecedents to the attribution processes that generate shame or guilt.

Since this project is examining body related experiences, self-representation about the physical self should influence attributions as well as the ensuing emotions. The way that individuals perceive themselves physically can be a factor in how they appraise situations that are relevant to their physical self and the subsequent experience of emotions. Considering this, it is anticipated that the current research will find a negative relationship between physical self-perception and experiences of body-related shame and guilt. In addition, since physical self-perceptions are relatively stable and associated with global self-esteem (Fox & Corbin, 1989; Marsh et al, 1994; Shavelson et al, 1976), it is anticipated that physical self-perception will be negatively related to global and stable attributions, and positively related to controllability attributions.

1.2.7 Shame and guilt proneness

Everyone experiences shame and/or guilt on a day to day basis, but what is it that makes some individuals prone to experiencing these emotions? The proneness to experience shame has been linked to childhood parentification (Wells & Jones, 2000) in addition to certain personality traits including narcissism and masochism (Jones & Wells, 1996), as well as perfectionism (Fedewa, Burns, & Gomez, 2005). Less empirical evidence exists regarding the reasons why individuals are prone to experiencing guilt; however, research exists in support of the distinction between shame proneness and guilt proneness. For instance, shame-prone individuals show a significant predisposition to externalize cause or blame, while this is not the case with guilt-prone individuals (Tangney, 1990). The propensity to experience shame and guilt has been associated with a number of maladaptive behaviours including psychological disorders such as depression (Orth, Berking & Burkhardt, 2006) as well as anger and aggressive tendencies (Tangney, Wagner, Barlow, Marschall & Gramzow, 1996). However, proneness to shame in

comparison to proneness to guilt has been shown to result in more dire consequences. For example, Tangney et al. (1996) found that shame proneness was consistently related to malevolent intentions, direct, indirect and displaced aggression, self-directed hostility, and projected negative long-term consequences of everyday episodes of anger. In contrast, guilt was generally associated with constructive means of handling anger, such as corrective or reparative action.

Considering the results of the aforementioned research, it is evident that the propensity to experience shame and guilt, but shame in particular, can have destructive consequences on mental health. Therefore, it is expected that individuals who are prone to feeling shame and guilt will report greater instances of body-related shame and guilt in contrast to those who are not prone to experiencing shame and guilt. In terms of attributions, it is possible that the attributions of shame prone individuals may differ from those of individuals who are guilt prone as well as those not prone to shame and guilt. For example, Tangney (1990) found that shame proneness, but not guilt proneness, showed a strong positive correlation to external attributions and blame. However, it is anticipated that the attributions of shame and guilt prone individuals will be in agreement with those of the existing literature concerning the attributions of individuals who have a shame or guilt experience, but are not necessarily prone to these emotions. Therefore, it is expected that shame prone individuals are more likely to have stable, global, and uncontrollable attributions, while guilt-prone individuals will be more likely to have unstable, controllable, and specific attributions.

1.2.8 Methodological challenges

There were certain methodological challenges associated with examining the current research model (see figure 1.2) including type of design, creating situations that generate shame and guilt, and the measurement of relevant constructs. Since shame and guilt are powerful negative emotions, experimentally creating real situations to produce shame and guilt have a number of ethical concerns. In response to these concerns, researchers have typically used two different methodological protocols. The first involves asking participants to recall a personal relevant situation that produced shame or guilt (Brune et al., 2010; Fromson, 2006; Schellenberg et al., 2010; Tangney, 1996). Researchers can then perform content analysis to determine the presence of critical underlying factors such as attributions, the presence of others, triggering conditions, and so forth. Unfortunately, participants may not report information on the crucial factors associated with the specific emotions. Other problems might include memory errors and the reporting of diverse situations related to the emotion.

An alternative methodological protocol is to provide a hypothetical scenario that contains key elements that are thought to trigger guilt or shame (or other emotions) in particular contexts and then measure specific constructs in response to the scenario (Tangney, 1996). The advantage of this approach is that the situation is the same for all participants and emotional responses should be governed by factors (such as attributions, physical self-perception, and shame and guilt proneness) that influence the interpretation of the scenario. The disadvantage of the scenario is that it might not be relevant to the participant and / or it doesn't produce the same level of emotion as a real situation. The present thesis utiltized the scenario approach coupled with a manipulation check.

1.1 RESEARCH STATEMENT AND HYPOTHESES

The literature review has provided evidence that shame and guilt are in fact distinct emotions, and they are elicited by divergent contexts and appraisals and result in different behaviours. The current research model holds that the emotions of guilt and shame are produced by specific attributions which are influenced by the person factors of physical self-perception and shame and guilt proneness. It is possible that these person factors have a direct effect on the experience of body-related shame and guilt but this effect should be largely mediated by attributions. Therefore, the present study will investigate the mediation model shown in figure 2. The current study proposes the following hypotheses:

- Hypothesis 1(a): Shame will be positively related to stable and global attributions and negatively related to controllable attributions. (b) Guilt will be positively related to controllable attributions and negatively related to stable and global attributions.

- Hypothesis 2: Physical self-perception will be negatively related to shame and guilt.

- Hypothesis 3: Shame proneness and guilt proneness will be positively related to both guilt and shame.

- Hypothesis 4: Physical self-perception will be negatively related to stable and global attributions and positively related to controllability attributions.

- Hypothesis 5: (a) Shame proneness will be positively related to stable and global attributions and negatively related to controllability attributions. (b) Guilt

proneness will be positively related to controllable attributions and negatively

related to stable and global attributions.

- Hypothesis 6: The effects of physical self-perception and shame/guilt proneness

  on shame and guilt will be mediated by attributions, as outlined in hypothesis 1.

CHAPTER 2: METHODOLOGY

2.1. SAMPLE

Females aged 17-25 were recruited from the University of British Columbia. Participants were included if they were female, between the ages of 17-25, and could read and comprehend English. Data were originally collected from 492 participants and after deleting those with too many missing data points or incomplete surveys (see section 3.1.1), a sample size of $n = 414$ remained. This sample was then further reduced after excluding all participants who scored below 5 on the manipulation check ($n= 130$) (see section 2.1.2.1), resulting in a final sample size of $N = 284$.

2.1.1. Description of participants

Demographic data pertaining to the participants was obtained at the beginning of an online questionnaire. Participants were asked to respond to questions pertaining to age, height, weight, socio-cultural information, as well as parental education level. Tables 2.1 - 2.3 provide summaries of the participants' demographic information. The majority of participants identified as being either Caucasian or Chinese, and most participants indicated having college educated parents.

Table 2.1

Participant age, height, and weight information

	reported range	mean	SD
Age	17-25	20.59	1.92
Height	150cm-185cm	162.59cm	18.34
Weight	84lbs-215lbs	132.14lbs	26.38

Table 2.2

Participant Socio-Cultural Information

	n	%
Aboriginal	1	0.4
Arab	2	0.7
Black	1	0.4
Caucasian	96	34.0
Chinese	90	32.0
Filipino	4	1.4
Japanese	3	1.1
Korean	9	3.2
South and South-East Asian	24	8.5
West Asian	3	1.1
*Other	36	12.6
Unreported	13	4.6

participants in this category were primarily of mixed socio-cultural background

Table 2.3

Participant's Parental Education Statistics

	Mother		Father	
	n	%	n	%
Did not graduate high school	20	7	17	6
Graduated high school	48	16.9	36	12.7
Some college/university	48	16.9	41	14.4
Graduated from college/university	155	54.6	178	62.7
Not sure	9	3.2	8	2.8
Unreported	4	1.4	4	1.4

2.1.1.1 Recruitment

The major recruitment method to obtain participants for this study was web based. The study was advertised on two of the University of British Columbia Psychology department websites: the human subject pool (HSP) website, which provides psychology credits to students for their participation in the studies listed on this website, and the paid psychology studies website, which advertises psychology based studies which provide remuneration to participants. In addition to website recruitment, classroom recruitment was also employed to acquire participants. In this method, the researcher visited five undergraduate classes in the psychology and human kinetics departments of the University of British Columbia to give a brief verbal synopsis of the study. Class sizes ranged from 140 students to 290 students. Handouts detailing further information about the study, as well as a direct link to the online study, were provided to those who expressed an interest in participating in the study.

2.1.1.2 Design

Ethics approval for this research was granted by the University of British Columbia's behavioural research ethics board. The study was questionnaire based and delivered in an online format. Participants began by completing demographical questions such as: date of birth, height, weight, socio-cultural status, and parental education level. Following this, participants completed measures of physical self-perception and shame and guilt proneness. Participants were then instructed to read a hypothetical scenario (see below) designed to elicit a negative emotional response regarding the body. The scenario was developed based on key features identified in recent empirical research related to the body (Schellenberg et al., 2010; Brune et al, 2010). These key features consist of the common triggers and contexts involved in the elicitation of body related shame and guilt. These studies found that guilt was triggered by eating and exercise behaviour, drinking behaviour, and appearance while shame was triggered by negative self-judgement, negative social-judgement, appearance, and physical incompetence. In addition to identifying the common triggers associated with body-related shame and guilt, these studies also documented the common contexts involved with these emotions. The common contexts for guilt included clothes shopping, sport and exercise settings, and social outings. The common contexts for shame included clothes shopping, change rooms/locker rooms, social outings, and weight rooms/exercise settings. The hypothetical scenario developed for this study was as follows:

"You feel panic as you realize that summer, the season of bathing suits and body-revealing clothing, is almost here. Over the past few months you've been busy with schoolwork and studying for exams, you haven't been physically active, and you've been eating a lot of junk food and fast food. Most of your clothing has gotten too tight and you feel it no longer looks good on you. You decide to go on a shopping trip with your best friend Emily. While

trying on clothes you are shocked to discover that you've gone up two whole dress sizes, and you feel that nothing you try on looks good on your new larger body. Dismayed, you turn to Emily, while grabbing a handful of your flabby stomach for emphasis, and complain that you need to get in shape. Emily laughs and nods in agreement, and convinces you to go with her to an aerobics class that night. When you arrive at aerobics class, you immediately begin to have second thoughts as you notice how toned everyone is, but you decide to stick it out. In the change room, you feel like everyone's eyes are on you, scrutinizing your body, and you try to change as quickly as possible. A few minutes into the aerobics class and you're sure you hear someone behind you making a negative comment about your body shape. When the class finally ends, you change quickly and leave".

After reading the scenario, participants completed a manipulation check (see section 2.1.2.1) which assessed whether or not they were effectively able to envision themselves in the scenario. Participants then completed measures of state shame and guilt, as well as attributions in response to the hypothetical scenario.

2.1.2 Measures

    2.1.2.1 Manipulation check

       Immediately after reading the scenario, participants were asked a couple of questions (Appendix H) pertaining to the hypothetical scenario in an effort to assess: (a). whether participants were able to envision themselves in the scenario, "*I was able to picture myself in the scenario",* (b). whether participants would feel distress if the events in the scenario were to happen to them, *"I would feel distress if the events in the scenario were to happen to me."* Participants were instructed to rate their responses on a scale of 1-7, with 1= *strongly disagree,*

and 7= *strongly agree*. Participants' responses on the manipulation check were used to select the final sample. Those participants who scored a 5 or above on question one of the manipulation check were identified and isolated and these individuals comprise the final sample used in all statistical analyses.

2.1.2.2 Attributions

Causality was measured using a modified version of the controllability, stability, globality, and universality scale (CSGU; Coffee & Rees, 2008), which is a 16-item scale assessing controllability (internal vs. external), stability (stable vs. unstable), globality and universality (see appendix J). Only the controllability, stability, and globality subscales of the CSGU were utilized in this research as there is no empirical evidence to support universality as a factor in the elicitation of self-conscious emotions. The CSGU does not provide a specific measure of locus of control, but rather locus is inferred with the notion of by the person control via the controllability dimension (Coffee & Rees, 2008) thereby assuming that the controllability dimension is internal. Respondents were required to answer questions regarding causality such as (*are the reasons something that...*) "*you could control in the future*" (controllability), "*you feel remain constant over time*" (stability), and "*affect a wide variety of outcomes for you*" (globality). Respondents rated their responses on a scale of 1 (not at all) to 5 (completely; Coffee & Rees, 2008). Items 12, 14, 15, 21 and 24 of the original scale were modified for this study to change the emphasis from that of performance to a more general context. For instance, item 12 was modified from "*is a common cause of performance for other athletes*" to "*is a common cause for others*", and item 14 was modified from "*does not fluctuate across performances*" to "*does not fluctuate across situations.*" The CSGU is shown to have good reliability, with alpha

coefficients of the four subscales ranging from α = .79 to α = .91. in addition to evidence of internal consistency (Coffee & Rees, 2008).

2.1.2.3 Physical appearance perception

Select scales from the Physical Self-Description Questionnaire (PSDQ, Marsh, Richards, Johnson, Roche, & Tremayne, 1994) were used to assess participants' physical appearance perception (see appendix E). The PSDQ is a 70 item scale with 11 subscales measuring various subdomains of the physical self in addition to a higher order (global) physical self-domain (Marsh et al, 1994). Only the 6-item global physical self-concept subscale and the 6-item body fat subscale of the PSDQ were utilized in this study. Respondents were required to answer questions regarding their physical self-perception such as: "*I have too much fat on my body*", "*My stomach is too big*", and "*physically I feel good about myself.*" Responses were rated on a scale of 1 (false) to 6 (true) (Marsh et al, 2004). The PSDQ scales are shown to have good internal consistency (median alpha =.92) and stability (r = .83) (Marsh, 1996).

2.1.2.4 Shame and guilt proneness

The test of self-conscious affect-3 short version (TOSCA-3S, Tangney & Dearing, 2002; Tangney, Dearing, Wagner, & Gramzow, 2000) was used to assess participants' proneness to shame and guilt (see appendix F). The TOSCA-3 is a scenario-based (10 negative and five positive) measure of shame and guilt proneness, responses are rated on a 5-point scale ranging from 1 (not likely) to 5 (very likely) (Tracy, Robins, & Tangney, 2007). A sample item is: *While playing around, you throw a ball and it hits your friend in the face,* responses for this item include: *a) You would feel inadequate that you can't even throw a ball. b) You would think*

maybe your friend needs more practice at catching. c) You would think: "It was just an

accident." d) You would apologize and make sure your friend feels better. Items 3, 4, 9, and 11

were modified to better reflect the study population. Specifically, this meant changing the

hypothetical situations in the specified items from work-related to school-related. For example,

item 4 of the original scale reads: "*You make a mistake at work and find out a co-worker is*

blamed for the error", responses for this item include*: a) You would think the company did not*

like the co-worker, b) You would think: "life is not fair", c) You would keep quiet and avoid the

*co-worker, d) You would feel unhappy and eager to correct the situation (*Tangney & Dearing,

2002). Item 4 was modified for this study to read: *You make a mistake at school and find out a*

fellow student is blamed for the error, responses for this item include: *a) You would think the*

teacher did not like the student. b) You would think: "life is not fair." c) You would keep quiet

and avoid the student. d) You would feel unhappy and eager to correct the situation. The

TOSCA-3 has shown high reliability (α=.76) as well as good validity (Mullins-Nelson, Salekin,

& Leistico, 2006). The TOSCA-3S is identical to the TOSCA-3 except it eliminates the positive

scenarios (thereby eliminating the assessment of proneness to pride). The TOSCA-3S shame and

guilt scales have been show to correlate .94 and .93 respectively with the full-length TOSCA-3

assessment of shame and guilt (Tangney & Dearing, 2002).

2.1.2.5 State shame and guilt

Participants were assessed on measures of state shame and guilt with the state shame

and guilt scale (SSGS, Marschall, Sanftner, & Tangney, 1994). The SSGS consists of 15 items

designed to measure state shame, guilt, and pride; however, only the shame and guilt subscales

were utilized in this study (see appendix I). Sample items include: "*I want to sink into the floor*

and disappear", "*I felt remorse, regret*", and "*I feel worthless, powerless*" (Marschall, Sanftner,

& Tangney, 1994). Responses are rated on a 5-point scale ranging from1 (not feeling this way at all) to 5 (feeling this way very strongly). The tense of the SSGS was modified for this study from the present tense to the past tense, as participants were instructed to answer the items on the SSGS while reflecting on their emotional state upon reading the hypothetical emotion-eliciting scenario. For instance, item 3 above was modified from *"I feel worthless, powerless"* to *"I felt worthless, powerless."* The SSGS has been shown to have high reliability (α=.89 for shame, α=.82 for guilt; Tracy, Robins, & Tangney, 2007).

2.1.3 Data analysis

2.1.3.1 Procedures

A variety of statistical procedures were utilized to examine missing data, correlations, scale reliabilities, calculate descriptive statistics, and test hypotheses. A series of multiple regression analyses were conducted to examine the more simple predictive equations associated with hypothesis 1a, 1b, 2, 3, 4, and 5. Finally, mediation analysis was conducted to determine whether attributions mediate the relationships between physical self-perception, shame and guilt proneness and state shame and guilt (hypothesis 6). All statistical analyses were performed using SPSS 17, PASW 18, and Mplus version 6.11 statistical software. Prior to conducting the statistical analyses, all variables were examined to test the assumptions of: normality, linearity and homoscedasticity.

2.1.3.2 Testing for mediation

Baron and Kenny's (1986) causal steps approach to testing mediation is by far the most widely used method for conducting mediation analysis. The steps to the Baron and Kenny method are as follows: (a) the independent variable is regressed on the dependent variable to establish a relationship (b) the mediator is regressed on the independent variable to establish path a (c) the dependent variable is regressed on both the mediator and independent variable, providing path b. As widely used as this method is, it has been the subject of recent criticism due to problems with low power and the fact that this method does not actually test the significance of the indirect pathways, rather, results are inferred through hypothesis testing, which by nature can be statistically unsound due to the associated decision error (Fritz & MacKinnon, 2007; Hayes, 2009). The first criterion of Baron and Kenny's causal approach is that the relationship between the independent variable and the dependent variable must be statistically significant in order to test for mediation (Baron & Kenny, 1986). One major flaw with this stipulation occurs if a relationship exists only when a mediating variable is added into the equation, but this relationship is not detected as further analysis was rejected due to this condition not being met (Hayes, 2009).

Another criticism of the Baron and Kenny method is that mediation is defined as either full (when the effect of the independent variable on the dependent variable is reduced to 0 with the addition of the mediating variable) or partial (when the effect of the independent variable on the dependent variable is reduced, but is not reduced to 0, with the addition of the mediating variable) (Baron & Kenny, 1986; Preacher & Hayes, 2004). Recently, however, researchers are moving away from the notion of full or partial mediation, and simply reporting that mediation is present if either of the preceding criteria has been met (Frazier, Tix, & Barron, 2009).

Hayes (2009) proposes that calculating and testing the indirect effects is a more efficient method of testing for mediation than using a series of multiple regressions. Hayes (2009) outlined several procedures for testing the indirect effects of mediation which improve upon the Baron and Kenny method including the Sobel test (Sobel, 1982) and bootstrapping procedures. A limitation of the Sobel test is that it works on the assumption that the data is normally distributed, as the bootstrapping method does not work on this assumption, it is the preferred method for testing mediation, and therefore the one utilized in this research.

In an effort to analyze the effects of stability, globality, and controllability attributions on the relationship between physical self-perception and shame and guilt proneness with shame and guilt, mediation analysis was conducted using Mplus software version 6.11. Bootstrapping level was set to 5000, and the standard errors, indirect effects, and confidence intervals of the model were requested.

CHAPTER 3: RESULTS

3.1 PROCEDURE

3.1.1 Missing data and evaluation of assumptions

Before conducting any statistical analysis, the data were screened for missing responses, and participants with two or more missing data points ($n = 78$) were eliminated from analysis. There were $n = 43$ cases of missing data. All missing data was replaced using the within-person median value for that particular scale. A summary of the specific missing scale items is provided in table 3.1.

Once all missing data were replaced, the data set was examined for assumptions of regression (Miles & Shevlin, 2001). Homoscedasticity was tested by examining scatterplots of the residuals. The plots confirmed that the data shows a random and symmetrical pattern around zero, and no outliers were detected. Cooks D statistics for the residuals were also examined to identify potential outliers. As no one value was significantly greater than another, in fact all values were < 1, thus indicating that no outliers were present (Cook & Weisberg, 1982). Histograms and p-p plots of the residuals were examined to test for normality and linearity, the results indicated that these assumptions were met. Durban-Watson scores for all regressions performed were ≈ 2.00, indicating that no serial correlation was present. Finally, VIF and Tolerance scores for all regression analyses performed were examined to identify multicollinearity. According to Bowerman and O'Connell (1990), VIF scores should be well below 10, (average around one) and Tolerance scores should be greater than 0.2. As all VIF scores were < 4, and all Tolerance scores were > 0.2, indicating that multicollinearity was not present.

3.1.1.2 Revising assessment of global physical self-concept

Original analysis was conducted using the body fat subscale (reverse scored) and global physical subscale of the PSDQ combined to measure physical self-perception. However, the two subscales are very highly correlated ($r = .74$) and separate analysis using each subscale individually rather than combined yielded similar results. Therefore, since the global physical scale is a higher order scale in the hierarchy of physical self-perception, only this scale was retained as a measure of physical self-perception in this study.

3.1.1.3 Scale reliabilities and descriptive statistics

Scale reliabilities and descriptive statistics for the eight measures utilized in this study are summarized in tables 3.2. All scales show acceptable reliability, with the Cronbach's alpha values for the eight measures ranging from $\alpha = .751$ to .962. A correlation matrix is provided in table 3.3.

Table 3.1

Summary of missing data

Scale	Item	N
SP	5a	1
	6b	1
	9b	1
GP	1c	2
	2a	1
	3c	1
	5d	1
	6d	2
	10c	2
Shame	7	1
	9	3
Guilt	2	1
	4	2
	8	1
	10	2
Stability	2	1
	3	2
	6	3
	11	2
Globality	5	2
	7	2
	12	4
Controllability	4	2
	10	3

note: there were no missing items from the global physical self-concept scale. SP = shame proneness, GP = guilt proneness

Table 3.2

Scale Reliabilities

Scale	Scale Item Range	Scale Range	# of Items	α	M	SD
GPSC	1-6	6-36	6	.96	21.44	7.58
SP	1-5	11-55	11	.75	36.61	7.18
GP	1-5	11-55	11	.62	46.46	4.68
Stability	1-5	4-20	4	.82	11.10	2.53
Globality	1-5	4-20	4	.80	12.50	3.24
Controllability	1-5	4-20	4	.87	12.77	3.37
Shame	1-5	5-25	5	.79	15.76	4.74
Guilt	1-5	5-25	5	.85	13.11	5.10

note: GPSC = global physical self-concept, SP = shame proneness, GP = guilt proneness

Table 3.3

Correlation Matrix

Measure	1	2	3	4	5	6	7	8
1. GPSC	1							
2. SP	-.38**	1						
3. GP	-.10	.33**	1					
4. Control	.30**	-.24**	.05	1				
5. Stability	.01	.04	-.00	.14*	1			
6. Globality	-.18**	.23**	.12*	.14*	.38**	1		
7. Shame	-.30**	.53**	.16**	-.26**	.04	.35**	1	
8. Guilt	-.28**	.43**	.06	-.22**	.22**	.32**	.64**	1

note: GPSC = global physical self-concept, SP = shame proneness, GP = guilt proneness

 *p < .05, two-tailed
**p < .01, two-tailed

3.1.2 Testing the hypotheses

3.1.2.1 Hypothesis 1(a): Shame and attributions

Hypothesis 1(a) predicted that shame would be positively related to stable and global attributions and negatively related to controllable attributions. This hypothesis was partially supported. Results indicated that shame showed a weak significant relationship with controllability attributions ($r = -.26$) as well as global attributions ($r = .35$). However, the relationship between shame and stable attributions was not significant ($r = .04$) (see table 3.3).

3.1.2.2 Hypothesis 1(b): Guilt and attributions

Hypothesis 1(b) predicted that guilt would be negatively related to stable and global attributions and positively related to controllable attributions. The results did not provide support for this hypothesis. Guilt showed a negative and weak significant relationship with controllable attributions ($r = -.22$), and a positive and weak significant relationship with stable ($r=.22$) and global attributions ($r = .32$) (see table 3.3). The results failed to provide support for hypothesis 1b.

3.1.2.3 Hypothesis 2: Global physical self-concept and shame and guilt

The prediction for hypothesis 2 stated that global physical self-concept would be negatively related to both shame and guilt. This hypothesis was fully supported, as results showed that global physical self-concept had a negative and weak significant relationship with both shame ($r = -.29$) and guilt ($r = -.28$) (see table 3.3).

3.1.2.4 Hypothesis 3(a): Shame proneness with shame and guilt

The prediction for hypothesis 3(a) stated that shame proneness would be positively related to both shame and guilt. The results provided support for this hypothesis. Shame proneness showed a positive and moderate significant relationship with both shame ($r = .53$) and guilt ($r = .43$) (see table 3.3).

3.1.2.5 Hypothesis 3(b): Guilt proneness with shame and guilt

The prediction for hypothesis 3(b) stated that guilt proneness would be positively related to both shame and guilt. Guilt proneness showed a positive and weak significant relationship with shame ($r = .16$), but the relationship between guilt proneness and guilt was not significant ($r = .06$) (see table 3.3), providing partial support for this hypothesis.

3.1.2.6 Hypothesis 4: Physical self-perception's relationship with attributions

Hypothesis 4 proposed that global physical self-concept would be negatively related to stable and global attributions and positively related to controllability attributions. Results showed that global physical self-concept had a positive and weak significant relationship with controllable attributions ($r = .30$) and a negative and weak significant relationship with global attributions ($r = -.18$). The relationship between physical self-perception and stability attributions was not significant ($r = .01$) (see table 3.3). These results provided partial support for hypothesis 4.

3.1.2.7 Hypothesis 5(a): Shame proneness and attributions

The prediction for hypothesis 5(a) stated that shame proneness would be positively related to stable and global attributions and negatively related to controllable attributions. The results provided partial support for this hypothesis. Shame proneness showed a positive and weak significant relationship with global attributions ($r = .23$) and a weak significant negative relationship with controllable attributions ($r = -.24$). The relationship between shame proneness and stable attributions was not significant ($r = .04$) (see table 3.3).

3.1.2.8 Hypothesis 5(b): Guilt proneness and attributions

Hypothesis 5(b) stated that guilt proneness would be positively related to controllable attributions and negatively related to global and stable attributions. The results did not support this hypothesis. Guilt proneness showed a positive and weak significant relationship with global attributions ($r = .12$). The results showed no significant relationship between guilt proneness and stable attributions ($r = -.00$) as well as controllable attributions ($r = .05$) (see table 3.3).

3.1.2.9 Hypothesis 6: The mediating effects of attributions

The prediction for hypothesis 6 stated that specific attributions would mediate the effects of global physical self-concept with shame and guilt proneness on state shame and guilt. Separate hierarchical regressions were used to test hypothesis 6 for each state emotion. In step 1, physical self-perception, shame proneness and guilt proneness were entered into the first block. In step 2, globality, stability, and controllability attributions were entered into the second block with shame and guilt entered as the dependent variables. In addition, in separate regression analyses, physical self-perception, shame proneness, and guilt proneness were regressed on each

attribution to determine the relationship of the independent variables with the (possible) mediators.

3.1.3 Regression analysis

3.1.3.1 Person factors with attributions

Coefficients for the relationship among the independent variables (global physical self-concept, shame proneness and guilt proneness) with attributions are summarized in table 3.4. Physical self-concept, shame proneness, and guilt proneness were regressed together on each attribution in a series of regression analyses. Results showed that global physical self-concept was significantly and positively related to controllability attributions (β = 0.247), while the relationship between global physical self-concept and stability (β = 0.036) and globality (β = -0.110) attributions was not significant. Shame proneness showed a significant positive relationship with globality attributions (β = 0.167), a significant negative relationship with controllability attributions (β = -0.187), and no significant relationship with stability attributions (β = 0.064). Finally, guilt proneness showed a significant and positive relationship with controllability attributions (β = 0.138) and an insignificant relationship with both stability (β = -0.020) and globality (β = 0.056) attributions.

Table 3.4

Summary of regression analysis of person factors on attributions

	Dependent variable					
	Stability		Controllability		Globality	
	Beta	t	Beta	t	Beta	t
Measure						
GPSC	0.036	0.561	0.247	4.085**	-0.110	-1.763
SP	0.064	0.939	-0.187	-2.946**	0.167	2.536*
GP	-0.020	-0.312	0.138	2.336*	0.056	0.913

note: GPSC = global physical self-concept, SP = shame proneness, GP = guilt proneness. Beta values are standardized values.

 *p < .05, two-tailed
**p < .01, two-tailed

3.1.3.2 Regression analysis with shame as the dependent variable

Results of the first model, with the person factors of physical self-perception, shame proneness, and guilt proneness predicting shame, indicated that this model accounted for 28.8% of the variance ($R^2 = .288$). Standardized regression coefficients for the first model indicated that shame proneness ($\beta = .489$) and physical self-perception ($\beta = -.107$) were significant predictors of shame, while guilt proneness ($\beta = -.007$) was not significant (see table 3.5).

When attributions were added to complete the second model, results showed that these factors accounted for an additional 8.7% of the variance ($R^2 = .375$). Results showed that shame proneness remained a significant predictor of shame ($\beta = .407$), the relationship of global physical self-concept becomes non-significant and guilt proneness remained non-significant (see table 3.5). Global ($\beta = .303$) and controllable ($\beta = -.189$) attributions were significant predictors

of shame, while stability attributions (β = -.068) were non-significant (see table 3.5). These

results provided partial support for the hypothesis.

Table 3.5

Model Summary and Coefficients for Regression Analysis with Shame as the Dependent Variable

	Beta	t	se	R^2	R^2 change
Model 1				0.288	
GPSC	-0.107	-1.970*	0.034		
Shame Proneness	0.489	8.520*	0.038		
Guilt Proneness	-0.007	-0.133	0.054		

	Beta	t	se	R^2	R^2 change
Model 2				0.375	0.087*
GPSC	-0.025	-0.462	0.034		
Shame Proneness	0.407	7.281*	0.037		
Guilt Proneness	0.001	0.015	0.052		
Stability	-0.068	-1.326	0.077		
Globality	0.303	5.608*	0.079		
Controllability	-0.189	-3.615*	0.074		

note: GPSC = global physical self-concept

*$p < .05$, two-tailed
DV = Shame
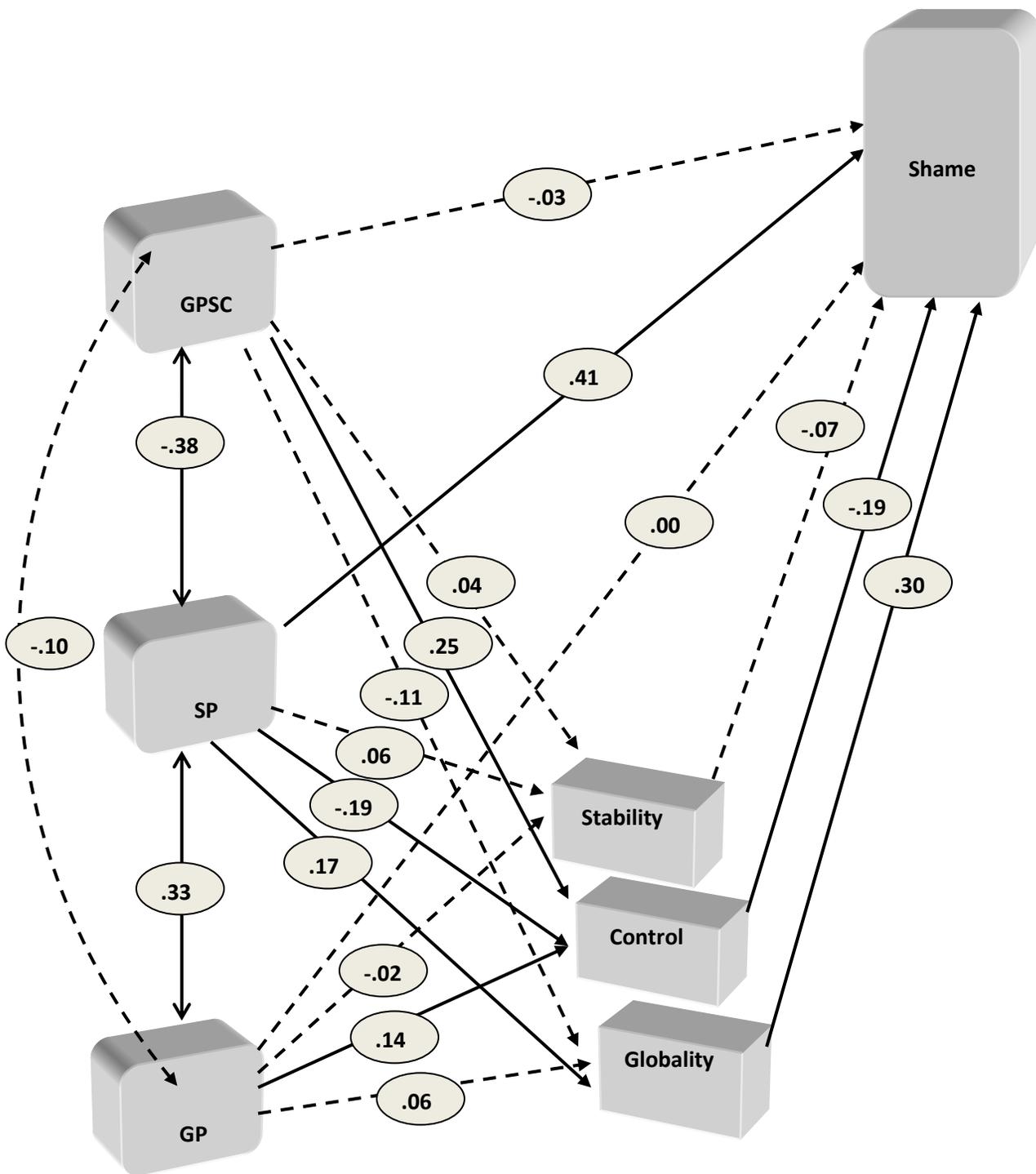
Figure 3.1

Summary of the regression coefficients with shame as the dependent variable. Solid lines represent significant pathways.

Note: GPSC is global physical self-concept, SP is shame-proneness, and GP is guilt proneness.

3.1.3.3 Regression analysis with guilt as the dependent variable

Results of the first model, with the person factors of physical self-perception and proneness to shame and guilt predicting guilt, indicated that this model accounted for 20.8% of the variance ($R^2 = .208$). When attributions were added in model 2, results showed that these factors accounted for an additional 8.7% of the variance ($R^2 = .295$) (see table 3.6).

Standardized regression coefficients for the first model indicated that shame proneness ($\beta = .406$) and physical self-perception ($\beta = -.139$) were significant predictors of guilt. A surprising outcome of the analysis revealed that guilt proneness was not a significant predictor of guilt ($\beta = -.088$) (see table 3.6).

When attributions were added to complete the second model, results indicated that shame proneness remained a significant predictor of guilt ($\beta = .332$) while physical self-perception did not ($\beta = -.082$). The results of model two also indicated that global ($\beta = .200$), uncontrollable ($\beta = -.162$), and stable ($\beta = .155$) attributions were all significant individual predictors of guilt (see table 3.6). These results provided partial support for the hypothesis.

Table 3.6

Model Summary and Coefficients for Regression Analysis with Guilt as the Dependent Variable

	Beta	t	se	R^2	R^2 change
Model 1				0.208	
GPSC	-0.139	-2.415*	0.039		
Shame Proneness	0.406	6.710*	0.043		
Guilt Proneness	-0.088	-1.555	0.061		

	Beta	t	se	R^2	R^2 change
Model 2				0.295	0.087*
GPSC	-0.082	-1.446	0.038		
Shame Proneness	0.332	5.597*	0.042		
Guilt Proneness	-0.073	-1.355	0.059		
Stability	0.155	2.822*	0.088		
Globality	0.200	3.476*	0.091		
Controllability	-0.162	-2.922*	0.084		

note: GPSC = global physical self-concept
p < .05, two-tailed
D V = Guilt
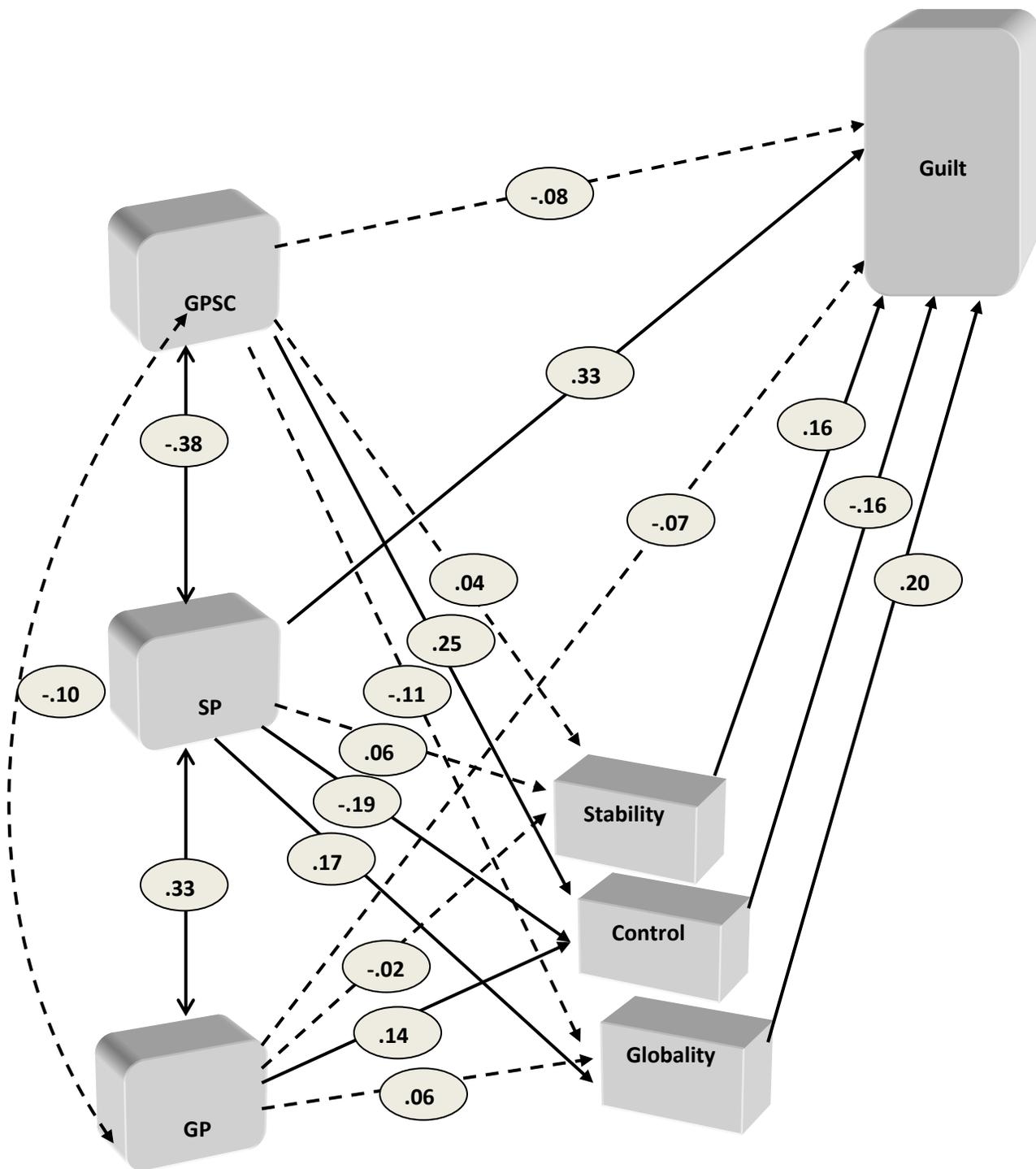
Figure 3.2 Summary of the regression coefficients with guilt as the dependent variable. Solid lines represent significant pathways.

Note: GPSC is global physical self-concept, SP is shame-proneness, and GP is guilt proneness.

The regression analyses indicated there is possible mediation in the relationship of physical self-concept and shame proneness with both shame and guilt, as the impact of these variables on shame and guilt are reduced in the second model when attributions are added and controlled for. However, due to the fact that multiple regression ignores measurement error, this type of analysis tends to underestimate mediation effects (Frazier, Tix, & Barron, 2009), therefore, additional analysis using a bootstrapping method is required in order to further explore this relationship.

3.1.4 Mediation analysis

Table 3.7

Test for Indirect Effects and Boot Strap Results from GPSC to Shame

	Estimate (a*b)	se	z	p	Boot Strap Results CI Lower	CI Upper
Stability	-0.002	0.006	-0.393	0.695	-0.015	0.010
Globality	-0.033	0.022	-1.494	0.135	-0.076	0.010
Controllability	-0.046	0.018	-2.496	0.013	-0.082	-0.010
Total	-0.081	0.025	-3.236	0.001	-0.130	-0.032

note: GPSC = global physical self-concept

3.1.4.1 Global physical self-concept with shame

Table 3.7 provides a summary of the results of the total and specific indirect effects as well as the bootstrap results of the relationship of GPSC with shame through stability, globality, and controllability attributions. Results showed that the total indirect effect was significant ($z = -3.236$, $CI_{95\%} = -0.130, -0.032$). However, the only significant specific indirect path was from GPSC to shame through controllability attributions ($z = -2.496$, $CI_{95\%} = -0.082, -0.010$). This indicates that when controlling for globality and stability attributions, controllability attributions mediate the effects of GPSC on shame. These results provided partial support for this hypothesis.

Table 3.8

Test for Indirect Effects and Boot Strap Results from Shame proneness to Shame

	Estimate (a*b)	se	z	p	CI Lower	Boot Strap Results CI Upper
Stability	-0.004	0.007	-0.651	0.515	-0.017	0.009
Globality	0.050	0.024	2.102	0.036	0.003	0.096
Controllability	0.035	0.015	2.279	0.023	0.005	0.065
Total	0.080	0.025	3.251	0.001	0.032	0.129

3.1.4.2 Shame proneness with shame

Upon examining the relationship of shame proneness with shame through stability, globality, and controllability attributions, results indicated that the total indirect effect of this path was significant ($z = 3.251$, $\text{CI}_{95\%} = 0.032, 0.129$). In addition, two of the specific indirect paths were significant; shame proneness with shame through controllability attributions ($z = 2.279$, $\text{CI}_{95\%} = 0.005, 0.065$), and shame proneness with shame through global attributions ($z = 2.102$, $\text{CI}_{95\%} = 0.003, 0.096$) (see table 3.8). This indicates that controllability and globality attributions do mediate the effects of shame proneness on shame, providing partial support for this hypothesis.

Table 3.9

Test for Indirect Effects and Boot Strap Results from Guilt proneness to Shame

	Estimate (a*b)	se	z	p	CI Lower	Boot Strap Results CI Upper
Stability	0.001	0.005	0.260	0.795	-0.009	0.011
Globality	0.017	0.018	0.927	0.354	-0.019	0.052
Controllability	-0.026	0.014	-1.791	0.073	-0.054	0.002
Total	-0.008	0.021	-0.370	0.712	-0.048	0.033

3.1.4.3 Guilt proneness with shame

Upon examining the relationship among guilt proneness on shame through stability, globality, and controllability attributions, results indicated that neither the total indirect effects nor the specific indirect effects of these models were significant. This suggests that attributions did not mediate the effects of guilt proneness on shame (see table 3.9), providing no support for this hypothesis.

Table 3.10

Test for Indirect Effects and Boot Strap Results from GPSC to Guilt

	Estimate (a*b)	se	z	p	Boot Strap Results CI Lower	CI Upper
Stability	0.006	0.012	0.464	0.643	-0.018	0.029
Globality	-0.022	0.016	-1.374	0.169	-0.053	0.009
Controllability	-0.040	0.018	-2.228	0.026	-0.075	-0.005
Total	-0.056	0.026	-2.193	0.028	-0.107	-0.006

note: GPSC = global physical self-concept

3.1.4.4 Global physical self-concept with guilt

A summary of the results of the total and specific indirect effects as well as boot strap results for the relationship of GPSC with guilt through stability, globality and controllability attributions is provided in table 3.10. The total indirect effect was significant ($z = -2.193$, $CI_{95\%} = -0.107, -0.006$), and the only specific indirect path which was significant is the path between GPSC and guilt through controllability attributions ($z = -2.228$, $CI_{95\%} = -0.075, -0.005$). This does indicate that when controlling for stability and globality attributions, controllability attributions mediate the effect of global physical self-concept on guilt, providing partial support for this hypothesis.

Table 3.11

Test for Indirect Effects and Boot Strap Results from Shame proneness to Guilt

	Estimate (a*b)	se	z	p	Boot Strap Results	
					CI Lower	CI Upper
Stability	0.010	0.013	0.780	0.435	-0.015	0.035
Globality	0.033	0.018	1.887	0.059	-0.001	0.068
Controllability	0.030	0.016	1.924	0.054	-0.001	0.061
Total	0.074	0.027	2.734	0.006	0.021	0.126

3.1.4.5 Shame proneness with guilt

A summary of the total and specific indirect effects for shame proneness with guilt through stability, globality, and controllability attributions is provided in table 3.11. Results indicated that none of the specific indirect effects of this model were significant, however, the total indirect effect of all three attributions was significant ($z = 2.734$, $CI_{95\%} = 0.021, 0.126$). This indicates that while none of the individual attributions mediated the relationship of shame proneness with guilt, all three attributions together did act as mediators in this relationship, providing partial support for this hypothesis.

Table 3.12

Test for Indirect Effects and Boot Strap Results from Guilt proneness to Guilt

	Estimate (a*b)	se	z	p	CI Lower	Boot Strap Results CI Upper
Stability	-0.003	0.010	- 0.309	0.757	-0.022	0.016
Globality	0.011	0.013	0.877	0.381	-0.014	0.036
Controllability	-0.022	0.014	-1.659	0.097	-0.049	0.004
Total	-0.014	0.021	-0.693	0.488	-0.055	0.026

3.1.4.6 Guilt proneness with guilt

Upon examining the relationship among guilt proneness on guilt through stability, globality, and controllability attributions, results indicated that neither the total indirect effects nor the specific indirect effects of these models was significant. This suggests that attributions do not mediate the effects of guilt proneness on guilt (see table 3.12), providing no support for this hypothesis.

3.1.5 Summary of results

Table 3.13

Summary of results by hypothesis

Hypothesis	Supported?	Data
1.a. Shame was hypothesized to be:		
a. Positively related to global attributions	Y	$r = .35$
b. Negatively related to controllable attributions	Y	$r = -.26$
c. Positively related to stable attributions	N	ns
1. b. Guilt was hypothesized to be:		
a. Positively related to controllable attributions	N	$r = -.22$
b. Negatively related to stable attributions	N	$r = .22$
c. Negatively related to global attributions	N	$r = .32$
2. Global physical self-concept was hypothesized to be:		
a. Negatively related to shame	Y	$r = -.30$
b. Negatively related to guilt	Y	$r = -.28$
3. a. Shame proneness was hypothesized to be:		
a. Positively related to shame	Y	$r = .53$
b. Positively related to guilt	Y	$r = .43$
3.b. Guilt proneness was hypothesized to be:		
a. Positively related to shame	Y	$r = .16$
b. Positively related to guilt	N	ns
4. Global physical self-concept was hypothesized to be:		
a. Negatively related to stable attributions	N	ns
b. Negatively related to global attributions	Y	$r = -.18$
c. Positively related to controllable attributions	Y	$r = .30$
5.a. Shame proneness was hypothesized to be:		
a. Positively relate to global attributions	Y	$r = .23$
b. Positively related to stable attributions	N	ns
c. Negatively related to controllable attributions	Y	$r = -.24$

Hypothesis	Supported?	Data
5. b. Guilt proneness was hypothesized to be:		
a. Negatively related to global attributions	N	$r = .16$
b. Negatively related to stable attributions	N	ns
c. Positively related to controllable attributions	N	ns
6. Attributions were expected to mediate the relationship of global physical self-concept, shame proneness, and guilt proneness with shame and guilt		
a. Physical self-concept→Controllability→Shame	Y	$z = -2.496$
b. Shame-proneness→Controllability→Shame	Y	$z = 2.279$
c. Guilt-proneness→Controllability→Shame	N	$z = -1.808$
d. Physical self-concept→Globality→Shame	N	$z = -1.494$
e. Shame-proneness→Globality→Shame	Y	$z = 2.102$
f. Guilt-proneness→Globality→Shame	N	$z = 0.926$
g. Physical self-concept→Stability→Shame	N	$z = -0.393$
h. Shame-proneness→Stability→Shame	N	$z = -0.651$
i. Guilt-proneness→Stability→Shame	N	$z = 0.263$
j. Physical self-concept→Controllability→Guilt	Y	$z = -2.228$
k. Shame-proneness→Controllability→Guilt	N	$z = 1.924$
l. Guilt-proneness→Controllability→Guilt	N	$z = -1.674$
m. Physical self-concept→Globality→Guilt	N	$z = -1.374$
n. Shame-proneness→Globality→Guilt	N	$z = 1.887$
o. Guilt-proneness→Globality→Guilt	N	$z = 0.875$
p. Physical self-concept→Stability→Guilt	N	$z = 0.464$
q. Shame-proneness→Stability→Guilt	N	$z = 0.780$
r. Guilt-proneness→Stability→Guilt	N	$z = -0.311$

CHAPTER 4: DISCUSSION

Shame and guilt are powerful emotions that have been linked to depression, anger and aggressive tendencies, anxiety, and hostility (Tangney et al, 1992), in addition to eating disorders and body image discrepancy (Noll & Fredrickson, 1998; Fuchs, 2002). Shame and guilt have also been linked to motivation for behaviour, such as physical activity and eating and drinking behaviour (Brune et al., 2010; Sabiston et al, 2010; Sanftner, Barlow, Marschall, & Tangney, 1995; Schellenberg et al., 2010). The specific purpose of this study was to examine an adapted model of shame and guilt in the physical domain (Tracy & Robins, 2004; 2006). In particular, this study examined the relationship among the person factors of physical self-perception and proneness to shame and guilt with attributions in the experience of body-related shame and guilt in response to a hypothetical scenario. The proposed model predicted that (a) the person factors of physical self-perception, shame proneness and guilt proneness would be significantly correlated with body-related shame and guilt, (b) body-related shame and guilt would be associated with specific and distinct attributional patterns, (c) the specific attributions in (b) would mediate the relationship of the person factors in (a) with body-related shame and guilt. The results, for the most part, supported our proposed model for predicting body-related shame; however, the model was not supported in regards to predicting body-related guilt. The remaining sections will provide a detailed discussion of the specific findings, in addition to the strengths, limitations, and implications of this research.

4.1.1 The relationship of shame and guilt with shame proneness, physical self-perception, and guilt proneness

4.1.1.1 Shame proneness

A key finding of this research was that among the three person factors assessed, proneness to shame was the most powerful predictor of body-related shame and guilt experiences. This conforms to the current theory that proneness to shame in contrast to proneness to guilt is a more intensely felt experience and results in more dire psychological and physical consequences (Tangney et al., 1992a; Tangney et al., 1992b; Fuchs, 2002; Swan & Andrews, 2003; Tiggemann, 2003). Research has shown that proneness to shame shares a much stronger association with psychological disturbances including anger and aggressive tendencies, depression, and hostility than does proneness to guilt (Tangney et al., 1992a; Tangney et al., 1992b). In accordance with this, individuals who are prone to experiencing shame are more likely to experience shame and guilt on a regular basis. It is theoretically sound to assume that individuals who are prone to experiencing shame are consistently more likely to experience shame as well as guilt across a multitude of contexts and situations (Tangney, 1990; Tangney et al., 1992a). Considering this, individuals prone to shame will also be likely to experience increased shame and guilt in relation to the body in comparison to those who are not prone to experiencing shame.

Existing research has shown that being prone to shame can have detrimental physical (Fuchs, 2002; Swan & Andrews, 2003; Tiggemann, 2003; Noll & Fredrickson, 1998) and psychological (Tangney et al., 1992a; Tangney et al., 1992b) consequences. The results of the current research indicate that being prone to shame is associated with increased experiences of

shame and guilt in a body-related context, and reduced global physical self-concept. This might leave these individuals more susceptible to eating disorders, dieting behaviour, and body dysmporphic disorder (Fuchs, 2002; Swan & Andrews, 2003). Additionally, shame prone individuals are also more likely to have poor body image and suffer from self-esteem issues in comparison to their non-shame prone counterparts (Tiggemann, 2003; Noll & Fredrickson, 1998).

4.1.1.2 Physical self-concept

As physical self-concept is associated with global self-worth and overall self-esteem (Shavelson, Hubner & Stanton, 1976; Fox & Corbin, 1989; Marsh, Richards, Johnson, Roche & Tremayne, 1994), the results fully support the prediction that global physical self-concept would be negatively related to both shame and guilt. The data also shows that global physical self-concept is negatively related to shame proneness, guilt proneness, and globality attributions and positively related to controllability attributions. It stands to reason that individuals with high physical self-concept have confidence in their physical appearance and are less likely to experience shame and guilt in relation to the body than individuals with a lower physical self-concept. This is particularly true considering that body-related shame is associated with body-image discrepancy (Bessenoff & Snow, 2006; Lin & Kulik, 2002) in addition to appearance and negative self and social judgement (Schellenberg et al., 2010), and body-related guilt is associated with appearance, eating and exercise behaviour, and identity incongruence (Brune et al., 2010). Individuals with a high level of physical self-concept are less likely to be susceptible to these concerns in comparison to those with low physical self-concept.

Brown and Marshall (2001) found that self-relevant emotions, such as shame, share a stronger association with self-esteem than other emotions including guilt. Sanftner and Crowther (1996) found that women with binge eating disorder experienced higher levels of shame and guilt as well as greater fluctuations in self-esteem compared to their healthy counterparts. Rusch and colleagues (2007) found that in comparison to their healthy counterparts, women with borderline personality disorder reported higher levels of shame and guilt proneness, and state shame which was associated with poorer quality of life, low self-esteem, and implicit self-concept.

4.1.1.3 Guilt proneness

As with shame proneness, guilt proneness is associated with a state of general negative affect, therefore it was predicted that guilt proneness would be positively related to shame and guilt. The results do not support this prediction. Guilt proneness did not significantly predict either body shame or guilt in response to the hypothetical scenario. This could be a result of the measure used to assess guilt proneness. The guilt proneness subscale of the TOSCA-3 has received criticism in the literature for consistently measuring below $\alpha = .70$ for reliability (Giner-Sorolla, Piazza, Espinoza, 2011). In addition, some researchers have suggested that the guilt proneness subscale of the TOSCA-3 assesses motivation to amend one's affective in response to a guilt inducing event rather than the affective state associated with the emotion (Giner-Sorolla, Piazza, Espinoza, 2011; Kugler & Jones, 1992). Recently, Giner-Sorolla and colleagues (2011) assessed the predictive ability of the TOSCA-3 in a study measuring state shame and guilt in response to prejudice feedback. Results showed that TOSCA shame was positively associated with state shame, but TOSCA guilt was not correlated with any state affect. Additionally, Rusch

and colleagues (2007) examined the validation of shame and guilt measures in a clinical and non-clinical population. Results indicated that shame proneness as assessed with the TOSCA-3 showed a significant negative relationship with self-efficacy and empowerment and a significant and positive relationship with trait anxiety, general psychopathology, and experiential avoidance in the non-clinical population. Guilt proneness, on the other hand, showed no significant relationships with any of the constructs assessed among the non-clinical sample. The difference among the guilt proneness and shame proneness scales became primarily insignificant among the clinical population.

To conclude, the results suggest that of the three person factors assessed, proneness to shame is the most powerful individual predictor of body-related shame and guilt. While physical self-perception was also found to be a significant predictor of body shame and guilt, the effect was weak. Surprisingly, guilt proneness was not found to be a significant predictor of either body-related shame or guilt, which may be the result of a measurement issue.

4.1.2 The relationship of stability, globality, and controllability attributions with body shame and guilt

4.1.2.1 Shame and attributions

The self-conscious emotion literature has consistently shown that shame is attributed to causes which are stable, global, and uncontrollable (Tangney et al., 1996; Tracy & Robins, 2006). Based on this evidence, it was predicted that shame would be positively related to global and stable attributions, and negatively related to controllability attributions. With the exception of the relationship of shame with stable attributions (insignificant), all of the predictions

regarding shame and attributions were confirmed. The finding that shame is positively related to global attributions and negatively related to controllable attributions is not surprising as considerable empirical research exists to support this finding (Tangney et al., 1996; Tracy & Robins, 2006). The lack of a relationship between shame and stable attributions was not expected, as prevailing self-conscious emotion literature supports a positive relationship between shame and stable attributions (Tangney et al., 1996; Tracy & Robins, 2006).

As limited research exists regarding attributions and body-related shame and guilt, it is unclear as to whether the results are specific to this study, or if they will be specific to the body-related context. The existing literature surrounding self-conscious emotions and attributions has primarily focused on performance (primarily academic) and relationships (personal/familial) as the contexts evoking self-conscious emotions. It is possible that body-related shame does not conform to the same attributional pattern found in other contexts which evoke shame.

Another possible reason for the finding that shame was not significantly related to stable attributions involves the hypothetical scenario. It is conceivable that the hypothetical events in the scenario were not specific enough to attribute to a stable cause. The events in the scenario may be more influenced by external factors, as in the unpleasant circumstances were mostly brought on by other people or reasons outside of themselves and therefore participants were not able to attribute the situation to their personality either as a stable factor or an unstable factor. It is interesting that shame was significantly correlated with global attributions but not stable attributions as the two appear to be similar in concept and are significantly correlated with each other. It would make sense that if a cause is attributed as something that is consistent across situations and contexts (global) for an individual, that this cause would also be something that remains constant across time (Coffee & Rees, 2008). However, this does not necessarily have to

be the case, particularly if the individual perceives that the cause of their shame is external. It is possible that participants perceived the events in the hypothetical scenario to be global across situations, but not a stable or unstable component of themselves, particularly if they attributed the events to external causes.

Additionally, research has shown that controllability attributions may be a stronger factor in the shame and guilt process than stability attributions. Tracy and Robins (2006) conducted a series of four studies examining the attriutional processes involved in shame and guilt. Results from study three showed that shame and guilt did not statistically differ in regards to causes attributed to stable factors (shame was slightly more likely to be attributed to stable causes than guilt). In addition, results from study four found that the interaction between emotion (shame and guilt) and controllability was significantly larger than the interaction between emotion and stability, indicating that controllability attributions may be a stronger factor in distinguishing between shame and guilt than stability attributions.

4.1.2.2 Shame proneness and attributions

Related to the findings regarding shame and attributions, a similar pattern was found regarding shame proneness and attributions. It was predicted that proneness to shame would be positively related to stable and global attributions, and negatively related to controllability attributions. Research in emotion literature has shown that shame proneness follows a consistent and distinct attributional style (Tangney et al., 1992a; Tangney et al., 1992b). In examining proneness to shame and proneness to guilt in psychopathology, Tangney et al., (1992a) assessed the attributional styles of shame proneness and guilt proneness in response to both positive and negative hypothetical scenarios. Results showed that shame proneness was associated with a

depressogenic attributional style. Specifically, shame proneness was consistently positively correlated with internal, stable, and global attributions in response to negative events and negatively correlated with internal, stable, and global attributions in response to positive events. Our results have shown that shame proneness is positively related to global attributions and negatively related to controllability attributions. However, as was found with shame, shame proneness showed no relationship with stability attributions. In fact, stability attributions were only significantly correlated with the other attributions assessed in this study, as well as guilt. This could be an issue with the stability measure used. However the stability subscale is part of a larger scale (CSGU) used to measure attributions. The scale showed sound internal consistency and the items appear to capture the construct of stability.

With the exception of stability attributions, shame proneness as assessed in this study conforms to the attributional pattern documented in existing self-conscious emotion literature (Tangney et al., 1992a; Tangney et al., 1992a). Considering this, it is reasonable to believe that individuals prone to shame are more likely to consistently attribute negative events to global and uncontrollable causes than their non-shame prone counterparts. This also leaves them vulnerable to the associated detrimental physiological and psychological outcomes correlated with shame proneness (Tangney et al., 1992a; Tangney et al., 1992b; Fuchs, 2002; Swan & Andrews, 2003; Tiggemann, 2003).

4.1.2.3 Guilt and attributions

While the results primarily support the hypothesized relationship between shame and attributions, an unexpected relationship was uncovered between guilt and attributions. A key finding of this study showed that guilt was negatively related to controllable attributions and

positively related to both stable and global attributions. These results are completely contradictory to the existing literature surrounding guilt and attributions. Tracy and Robins (2006) and Tangney and colleagues (1996) found that guilt is attributed to factors which are controllable, unstable, and specific. Considering that limited research exists surrounding attributions and body-related guilt, it is difficult to ascertain as to whether this pattern is abnormal, though it is certainly at odds with the pattern of guilt related attributions in other contexts. It is possible that the hypothetical scenario invokes a general negative affect, or that shame and guilt co-occur in relation to this hypothetical experience resulting in an inconsistent guilt response. As existing research has shown, it is often common for shame and guilt to co-occur and overlap (Keltner & Buswell, 1996; Tangney, 1990). The findings in this study found that shame and guilt responses were moderately correlated ($r = .64$). Considering this, it appears that participants were experiencing both shame and guilt in response to the hypothetical scenario.

A further explanation for these studies unexpected findings regarding guilt and attributions may involve the measure used to assess shame and guilt. The state shame and guilt scale (SSGS; Marschall et al., 1994) was used to assess state shame and guilt emotions in the current research. The SSGS has received criticism in the literature for not effectively distinguishing between the shame and guilt emotions (Fedewa, Burns, & Gomez, 2005; Kugler & Jones, 1992). Fedewa, Burns, and Gomez (2005) recently examined the relationships among guilt, shame, pride, and perfectionism. Results showed that shame (as assessed with the SSGS) was positively related to state guilt, trait shame, negative perfectionism, state anxiety, and aggression/hostility and negatively related to positive perfectionism and state pride. Given that guilt is expected to be a more adaptive emotion than shame (H.B. Lewis, 1971; Tangney et al., 1992a, it was hypothesized that guilt would show the opposite relationship to the constructs

measured from that of shame. Results showed that guilt (as assessed with the SSGS) was positively related to state shame, trait shame, negative perfectionism, state anxiety, and aggression/hostility and was negatively related to state pride. The relationship between guilt and positive perfectionism was not significant. The findings suggest that the SSGS may be measuring a general state of negative affectivity rather than affectively distinguishing between the constructs of state shame and guilt emotions (Fedewa & Burns, 2005).

4.1.2.4 Guilt proneness and attributions

Related to the findings regarding guilt and attributions, an unexpected relationship was also uncovered in regards to guilt proneness and attributions. The results showed that guilt proneness was positively related to global attributions, and no relationship was found between guilt proneness and controllable attributions or guilt proneness and stable attributions. Existing research in self-conscious emotions has also documented inconsistencies in regards to the attributional pattern associated with guilt proneness (Tangney, 1990; Tangney et al., 1992a). In examining proneness to shame and proneness to guilt and psychopathology, Tangney and colleagues (1992a) assessed the differences in attributional style of these two constructs. Results showed that while shame proneness followed a consistent attributional pattern, guilt proneness was less consistent and deviated from the expected pattern. Guilt proneness exhibited a positive relationship with global attributions in response to negative events, in addition to showing no relationship with specific attributions for negative events. Furthermore, when the Tangney and colleagues (1992a) examined the residual scores for shame and guilt, they found that the aforementioned associations resulted exclusively from the shared variance with shame. In light of this, it appears that the responses of guilt and guilt proneness are highly susceptible to the

influence of shame and shame proneness. This stands to reason given the tendency of shame and guilt to often overlap and co-occur (Keltner and Buswell, 1996) in addition to the powerful nature of the shame experience in comparison to guilt (H.B. Lewis, 1971; M. Lewis, 1993; Tangney et al., 1996).

In sum, the results suggest that the existing documented attributional pattern linked with shame and shame proneness is relatively consistent in a body-related context, while the attributional pattern routinely associated with guilt and guilt proneness may not necessarily be stable across contexts. While much of the existing research in self-conscious emotions has focused on an achievement context, this is one of the few studies to examine these emotions in relation to the body. More research needs to be done in this area to determine if these results are consistent across a body-related context, or are specific to the events in this study.

4.1.3 The mediating effect of attributions

Given the documented association among shame and guilt with globality, stability, and controllability attributions (Tangney et al., 1996; Tracy & Robins, 2006), it was expected that these attributions would act as mediators in the relationship between the person factors of physical self-concept, shame proneness, and guilt proneness with body-related shame and guilt experiences. The results of this study have only provided partial support for this prediction.

4.1.3.1 Mediation of shame proneness with shame

The results of our mediation analysis indicate that both globality and controllability attributions act as mediators in the relationship of shame proneness with shame, while stability attributions do not. As expected, the relationship of shame proneness with shame through

globality and controllability attributions is positive, indicating that an increase in shame proneness will result in a subsequent increase in shame indirectly through globality and controllability attributions. This is supported by theory as well as current research. Individuals who are prone to experiencing shame tend to be in a consistently negative affective state, resulting in a predisposition to experience shame in addition to other negative emotions (H. B. Lewis, 1971; M. Lewis, 1993; Tangney, 1990). Given that shame has been shown to be positively related to global attributions and negatively related to controllable attributions (Tangney et al., 1996; Tracy & Robins, 2006), it stands to reason that these attributions are likely to mediate the relationship between shame proneness and shame. Stability attributions are often thought to be positively correlated with shame (Tangney et al., 1996; Tracy & Robins, 2006), yet they were not found to mediate the relationship between shame proneness and shame in this study. This is not surprising given that stability attributions were not significantly correlated with either shame or shame proneness, nor were they significant predictors of shame in this study. Although the results of this study showed that globality and controllability attributions mediate the relationship of shame proneness with shame, a more significant finding of this study was that shame proneness was the strongest individual predictor of both body-related shame and guilt.

4.1.3.2 Mediation of global physical self-concept with shame

In regards to the relationship between physical self-concept and shame, the results showed that only controllability attributions function as a mediator. The specific indirect effect of physical self-concept on shame through controllability is negative, indicating that an increase in physical self-concept will result in a decrease in shame indirectly through controllability attributions. In fact, the total indirect effect of physical self-concept on shame through all three

attributions was significant and negative, indicating that as physical self-concept increases, shame decreases indirectly through controllability, stability, and globality attributions. The notion of controllability is an important factor not only in physical self-concept, but also in other areas such as academic achievement, global self-worth, and health outcomes (Frederickson & Jacobs, 2001; Penley, Tomaka, & Wiebe, 2002: Weiner, 1985).

Individuals with a high level of physical self-concept may believe that they have a lot of control over the factors which influence physical self-concept. Research surrounding attributions and coping style has shown that internal and controllable attributions are associated with a more constructive approach to handling the situation, such as a problem-focused coping style and seeking support, and negatively associated with a more destructive means of handling a problem including distance coping and an emotion-focused style of coping (Mikulincer & Solomon, 1989). This implies that when individuals perceive that they have control over a problem/issue, rather than ruminate over the issue and avoid the situation, they look for proactive ways to fix the situation. Studies in health have shown that more problem-focused coping leads to positive health outcomes, while a more emotion-focused coping approach leads to negative health outcomes (Penley, Tomaka, & Wiebe, 2002). Given that controllability actions are associated with guilt (Tangney et al., 1996; Tracy & Robins, 2006), which in turn is correlated with a strong and immediate need to repair the situation (H.B. Lewis, 1971; M. Lewis, 1993) it is likely that when an individual perceives that they have control over a situation they will look for ways to repair or alter the situation in order to improve the outcome.

4.1.3.3 Mediation of shame proneness with guilt

Mediation results indicate that no specific indirect path from shame proneness to guilt through the individual attributions was significant; therefore none of the three individual attributions acts as a mediator in this relationship. Additionally, the relationship is in a positive direction, indicating that an increase in shame proneness will result in a consequential increase in guilt indirectly through globality, stability, and controllability attributions as a group. These results are similar to those found in the relationship of shame proneness with shame through attributions. Given that shame prone individuals tend to be in a general state of negative affect (Tangney et al., 1992a; Tangney et al., 1992b) they have a propensity to not only experience shame, but also other negative emotions including guilt. As it is shame proneness that is driving the attributions, it stands to reason that the same attributions that mediate the relationship of shame proneness with shame would likely also mediate the relationship of shame proneness with guilt.

Although none of the three specific indirect paths from shame proneness to guilt through attributions was significant, the total indirect effect of shame proneness to guilt through all three attributions is significant. Thus taken individually, stability, globality, and controllability attributions do not mediate the relationship of shame proneness with guilt, however; as a group, these attributions do act as mediators in this relationship. This is likely due to the fact that the specific indirect effects of shame proneness to guilt through globality and controllability attributions are on the cusp of being significant. In conclusion, the data revealed that controllability attributions mediated the relationship of physical self-perception with shame and guilt, while globality and controllability attributions mediated the relationship of shame proneness with shame. No specific attributions were found to mediate the relationship of shame

proneness with guilt; however, the total indirect effect of shame proneness to guilt through all three attributions is significant. This indicates that as a group, these attributions do act as mediators in this relationship. The results also showed that no mediation occurred in the relationship between guilt proneness and guilt, or guilt proneness and shame. Given the finding that guilt proneness does not significantly predict either shame or guilt in relation to the body, it is not surprising that no mediation occurred in this relationship.

4.1.4 Summary and conclusion

Shame and guilt have been extensively studied in the emotion literature. Existing research has shown that shame and guilt are associated with distinct attributional patterns, generate specific emotional and physical responses, and exhibit predictable behavioural patterns (H. B. Lewis, 1971; M. Lewis, 1993; Tracy & Robins, 2004; 2006; Tangney, 1990; Tangney et al., 1996). Much of this research, however, has been limited to an achievement context. It is less clear if these attributes that have been associated with shame and guilt are consistent across contexts and situations. The results of this study have shown that body-related shame more or less conforms to the patterns documented in the existing self-conscious emotion literature, while body-related guilt does not. This study has also provided support for Tracy and Robins' (2004) model for predicting shame, but has provided little support for predicting guilt. Tracy and Robins' (2004) theoretical model of self-conscious emotions predicted that shame would be positively related to stable and global attributions and negatively related to controllability attributions, whereas guilt would be positively related to controllability attributions and negatively related to stable and global attributions. In 2006, Tracy and Robins tested their theoretical model using hypothetical scenarios in a series of four studies. Results from the four studies showed that when failure is attributed to internal, stable, uncontrollable causes shame

will result, whereas failure attributed to internal, unstable, controllable causes will result in guilt. While our results provide partial support for these findings in relation to shame, they do not agree with Tracy and Robins' findings for the relationship among guilt and attributions.

Of the three person factors assessed in this study, our results indicate that proneness to shame is the most significant factor in predicting body-related shame and guilt experiences in a female population. Given the existing research linking shame proneness to a variety of detrimental psychological and physical outcomes (Tangney et al., 1992a; Tangney et al., 1992b; Fuchs, 2002; Swan & Andrews, 2003) this result is not surprising. While physical self-concept was also found to be a significant predictor of body-related shame and guilt, it is surprising that it does not share a stronger relationship with body-related shame and guilt. Theoretically it would make sense that how one perceives their body would contribute significantly to their propensity to experience shame and guilt in relation to the body. However, since physical self-concept is negatively related to shame proneness, its effect on shame and guilt is extinguished when considered along with shame proneness. Therefore, it appears that being prone to experiencing shame is a more significant factor in this relationship.

In terms of the relationship between attributions and body-related shame and guilt, our results indicate that controllability and globality attributions are significant factors in this association. Results of this study showed that not only are controllability and globality attributions significant predictors of both body-related shame and guilt, they are also mediators in the relationship of physical self-concept with shame and guilt, and shame proneness with shame. The findings also support Coffee and Rees' (2008) argument that attributions play a pertinent role in the sport and exercise domains, given this, attributions may be the key to modifying behaviours in a body-related context as well as the sport and exercise domain.

4.1.5 Strength and limitations

4.1.5.1 Strengths

This study has several strengths, primarily the solid grounding in the theory of self-conscious emotions, and the basis of the theoretical model of self-conscious emotions (Tracy & Robins, 2004). Although the existing literature regarding self-conscious emotions has primarily focused on an achievement context, it nevertheless provides a solid knowledge base from which to expand. A further strength of this research involves the methodology employed. The hypothetical scenario method used allows for consistency regarding the situational context. By utilizing one identical scenario for all participants, there is no need to control for situational discrepancies. Having a hypothetical scenario which participants respond to rather than asking participants to recount shame and guilt experiences eliminates participants having to distinguish between shame and guilt experiences, which can often be a problem.

Additionally, this study had a large sample size, providing sufficient statistical power for analysis. According to Cohen (1992), the minimum sample size for maintaining power at .80, and detecting medium effect size in multiple regression analysis with six independent variables and $\alpha = .05$ is N = 97. The final sample size for this study was N = 284, which far exceeds the minimum sample size required (Cohen, 1992). Furthermore, multiple regression and mediation analysis allowed for the exploration of the relationship among person factors and body shame and guilt, in addition to examining the mediation effects of attributions in these relationships. Finally, this study utilized measures which have exhibited sound psychometric properties in previous research. The current research also provides further support for the reliability of these measures.

4.1.5.2 Limitations

As with most research, this study has several limitations. These include generalizability, problems with scenario-based methodology, format of delivery, and participant burden. As this study focused exclusively on female participants, the results are not generalizable to a male population. It was necessary to focus on one gender as males and females experience body-related shame and guilt differently. Males tend to experience body-related shame and guilt around the area of muscularity (lack thereof) whereas females tend to experience body-related shame and guilt around the areas of body size (weight) and shape (Fallon & Rozin, 1985; Tiggemann & Pennington, 1990). In accordance with this, in order to include both females and males in this study, it would be necessary to develop two separate scenarios, one for each gender. Although this would not be unfeasible, comparing across genders would be confounded by the scenario situation.

In addition, due to the narrow age range of the sample population (17-25) the results are not generalizable to an older or younger female population. The primary reason for the age range selected was ease of recruitment, the sample was primarily recruited from a major university, and this is the average age range of this demographic. As well, it was decided that older females would be excluded as they may not respond as well to the events in the hypothetical scenario, as research has shown that susceptibility to shame tends to decrease from late adolescence to middle adulthood (Orth, Robins, & Soto, 2010). As feelings of shame are linked to fear of social exclusion or social ridicule (H.B. Lewis, 1971; M. Lewis; 1993), and given that shame decreases across adulthood (Orth, Robins, & Soto, 2010) it is likely that older females are therefore less inclined to be influenced by social acceptance as their younger counterparts.

A further limitation of this study is that it utilizes a scenario-based technique. There are multiple issues involved with developing and using scenarios for research. One major issue is that it is impossible to develop a scenario which will elicit the desired response from the total population sample. The manipulation check was utilized to address this issue, as it helped to identify those participants who were not able to visualize themselves in the hypothetical scenario. These subjects were eliminated from analysis. Another limitation of the scenario-based approach is whether a hypothetical scenario can elicit a strong emotional response. The only alternative to this approach would be to have participants describe recent events of body-related shame and guilt, and this method is also plagued with limitations. The primary issue with this latter approach is in the willingness of participants to recount these uncomfortable and often painful events. Shame, in particular can be an extremely painful experience and therefore it can be very difficult for individuals to recall these events (Wicker, Payne & Morgan, 1983; Tangney, 1996). An additional issue with this approach is that participants often forget or choose not to disclose details, and that their emotional response to the event has faded in the time that has passed since the event. Considering the limitations, the scenario-based approach has been and continues to be used extensively in all areas of social research (Tangney, 1996; Abe, 2004).

A further limitation of this study involves the format of delivery. As the survey was available exclusively online, this limits participation to those who have access to the internet, as well as the skills required to navigate the internet. Considering the age of the population sample and that participants were recruited from a university population, this was not much of an issue. Most individuals in the sample age-range have proficient computer skills, and considering that the sample population consisted primarily of university students, it is assumed that the majority of them have internet access. A further issue with the online format, coupled with the

remuneration offered is the ease of access to the study. The ease of access and minimal effort required for participation might encourage participation from individuals who are not particularly interested in the study, rather only want a chance to win the prize. These individuals might not provide accurate responses as they only wish to complete the study for the possible prize. Theoretically, the manipulation check should help to eliminate this issue. As these individuals would likely not be able to visualize themselves in the hypothetical scenario due to their lack of interest in the study, they would be identified by their low score on the manipulation check and therefore eliminated from analysis.

A further limitation of this study involves participant burden. The questionnaire required a time commitment of approximately twenty to thirty minutes. To help ease the process of completing the questionnaire, it was completed online at the convenience of the participant rather than in person at a specific time or place. In addition, the lengthiest measures were placed at the start of the questionnaire, and whenever possible short form assessments were utilized in lieu of full measures.

4.1.6 Implications

The findings of this research present some important implications for work targeting body-related shame and guilt. One important result is that proneness to shame is a significant, and among the three person-factors assessed in this research, the strongest predictor of body-related shame and guilt. Research in the self-conscious emotion field has already documented the detrimental effects of shame-proneness, including associations with depression, anger and aggressive tendencies, self-directed hostility, malevolent intentions, suicidal thoughts, eating disorders, and body image disturbances (Fuchs, 2002; Swan & Andrews, 2003; Tiggemann,

2003; Noll & Fredrickson, 1998; Tangney et al., 1992a; Tangney et al., 1992b). Therefore, whenever possible there should be interventions in place designed to help shame prone individuals.

The finding that globality and controllability attributions mediate the relationship of shame proneness with shame and guilt provide a possible means of intervention. Attributional retraining has been successfully incorporated in treatments curbing aggressive behaviour (Hudley, Britsch, Wakerfield, Smith, Demorat, & Cho, 1998; Hudley & Graham, 1993), enhancing academic achievement (Perry & Penner, 1990; Hall, Hladkyj, Perry, & Ruthig, 2004; Hall, Perry, Goetz, Ruthig, Stupnisky, & Newall, 2007) targeting childhood depression (Tarnowski, Simonian, Bekeny, & Park, 1992) and enhancing motivation and emotion (Struthers & Perry, 1996). Attributional retraining has also been utilized successfully in the sporting and exercise domains. Le Foll, Rascale, and Higgins (2008) found that in a novice golfing population, functional attributional feedback resulted in improvements in causal attributions concerning failure, hopefulness, success expectations, as well as persistence following failure. In contrast, dysfunctional attributional feedback resulted in deteriorations in causal attributions concerning failure, hopefulness, success expectations, and persistence following failure. These results were also found to supersede participants' initial functional or dysfunctional attributions regarding failure. Additionally, Sarkisian, Prohaska, Davis, and Weiner (2007) found that attributional retraining resulted in increased walking levels and a subsequent improved quality of life among a previously sedentary older adult population. Considering that attributional retraining has achieved documented success across a variety of different contexts, it provides hope that this success will apply across all contexts, including body-related shame and guilt. By targeting the attributions that are associated with shame prone individuals, namely internal,

stable, and uncontrollable attributions for negative events (Tangney, 1990; Tangney et al., 1992a) it may be possible to change shame prone individuals' thought patterns regarding failure and negative events, thereby potentially reducing incidences of shame and negative affect.

4.1.7 Recommendations for future research

While the current study has garnered some interesting results surrounding body-related shame and guilt, they are correlational in nature and therefore causality cannot be inferred. Future research may wish to work towards establishing causality in this area. In addition, future research may want to explore body-related shame and guilt across a wider population sample than was included in the present research. Examining a wide age-range may provide some interesting findings regarding differences in body-related shame and guilt across the life-span. Such findings may address the stability of attributional style, experiences of body shame and guilt, and proneness to shame and guilt across an age-range. Additionally, examining these components across genders may also yield intriguing results.

Future research may also wish to assess locus of causality in the role of body-related shame and guilt. While shame and guilt are consistently attributed to an internal locus of control (Tangney et al., 1996; Tracy & Robins, 2006) this should not be assumed, particularly when exploring contexts for which there is little documented information regarding an attributional pattern. Furthermore, subsequent research may wish to include a measure which assesses a range of state emotional responses following an incident of shame or guilt. The current study only included a measure of state shame and guilt in response to the hypothetical shame or guilt event, therefore it is only possible to speculate as to what other emotions may have been experienced

which could explain the discrepancy in the attributional pattern shown for guilt and guilt

proneness in this study.

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Appendices

Appendix A – Recruitment poster

HAVE YOU EXPERIENCED NEGATIVE EMOTIONS IN RELATION TO YOUR BODY?
ARE YOU A FEMALE AGED 18-25?
IF SO, YOUR PARTICIPATION IS REQUIRED

What's involved?
Participation in this study involves the completion of an online questionnaire examining negative emotions in relation to the body. As the questionnaire is online, it can be completed at your convenience and will take approximately 20-30 minutes to complete.

Am I eligible to participate?
To be eligible for this study you must be a female between the ages of 18-25. You must also have a good command of the English language, including reading and comprehension.

Are there any benefits to participating in this study?
All participants in this study will be entered to win one of 12 $50 UBC bookstore gift cards. In addition, your participation will help to increase understanding of the processes involved in negative emotional experiences in relation to the body.

Are there any risks to participation in this study?
There are no foreseeable physical or psychological risks involved in participating in this study. You may refuse to answer any questions on the questionnaire, and you may withdraw your participation at any time without penalty.

What will happen with the information I provide?
Any information that you provide through participation in this study will be made anonymous and kept confidential, code numbers will be assigned to each participant for identification purposes. You are not required to provide any identifying information through participation in this study with the exception of an email address for purposes of awarding the 12 $50 UBC bookstore gift cards. Your email address will be removed from your questionnaire to prevent any identification of participants and protect your anonymity. All data from this study will be kept on password protected computers and paper copies will be kept in a locked filing cabinet in the office of the principal investigator.

I'm interested, who should I contact?
If you would like to participate in this study please contact Sara Brune. If you have any questions or concerns about your treatment or rights as a research participant in this study, you may contact the Research Subject Information Line at the UBC Office of Research Services.

Appendix B – Contact letter

<u>**Body-related emotions questionnaire**</u>

Sport and Exercise Psychology Lab
School of Human Kinetics
War Memorial Gymnasium
210 – 6081 University Blvd ,Vancouver, BC,
V6T 1Z1

This questionnaire package is part of a research study designed to examine the influence of physical self-perception and shame and guilt proneness on the experience and attributions of body-related shame and guilt.

As females are under increasing societal pressure to have slim, attractive, and toned bodies, it is not uncommon for women to develop negative feelings/attitudes towards their bodies in different contexts. Of particular interest to this research is how this influences the experiences of negative emotions related to the body, as well as the cognitions associated with these experiences. This research also intends to examine how personality and body self-concept impact these experiences. The primary implication of this research will be in understanding the negative emotion process in body-related experiences.

All participants will remain anonymous and no identifying information will be used in the write-up or publication of the results of this research. Code numbers will be assigned to each participant and this will be the primary manner in which subjects will be identified. All data will be stored on a password protected computer, as well as in a locked filing cabinet in the office of the principal investigator for a period of five years, after which all data will be destroyed.

The questionnaire will require approximately 20-30 minutes' time commitment, and participation is entirely voluntary. You may omit any questions which you do not feel comfortable answering, or stop answering this questionnaire at any time without penalty. By completing this questionnaire, your consent to participate in this research is assumed. If you have any questions regarding this research please contact the primary researcher: Sara Brune. If you have any questions regarding your rights as a research participant you may contact the Research Subject Information Line in the UBC Office of Research Studies.

Thank you very much for your participation in this study.

Appendix C – Consent form

Emotions and the body

Consent form

Peter Crocker, PhD, (principal investigator)   Sara Brune, BKin, (graduate student)
School of Human Kinetics   School of Human Kinetics
University of British Columbia   University of British Columbia

Project purpose and procedures:

The primary purpose of this research is to investigate negative emotions in relation to the body. In particular, through this research we hope to gain an understanding of how personality factors (shame and guilt proneness) and body self-concept influence cognitions and emotions related to the body.

This study consists of two parts, in part one, you will be asked to complete two questionnaires; an assessment of physical self-perception, and a measure of shame and guilt proneness. In part two of the study, you will be asked to read a brief scenario involving negative feelings regarding the body. After reading the scenario, you will be asked to complete assessments of emotions and cognitions related to the scenario. The entire questionnaire package will be completed online, at your convenience.

Confidentiality:

The identity and anonymity of all individuals who agree to participate in this study will remain in the strictest of confidence. No identifiable information will be made available in the written report of this study, and all participant information will be kept in a locked filing cabinet in the office of the principal investigator and only the principal investigator and persons involved directly in the research will have access to participant information.

Remuneration:

All participants will be entered in a draw to win one of 12 $50 UBC bookstore gift card as compensation for their time and participation in this study. In order to award the $50 gift cards, we ask that you provide an email address. Your email address will be removed from the questionnaire in order to ensure confidentiality.

Risks:

There are no foreseeable risks associated with participation in this study. However, as this research is dealing with emotions related to the body, this can be a sensitive area for some individuals. If, at any time during or after participation in this study, you feel the need to speak

with a professional regarding the content of the study, please contact UBC Counselling Services or Student Health.

Contact information about the project:

If you require further information about this project, please direct all questions and concerns to: Dr. Peter Crocker.

Contact information regarding the rights of research subjects:

If you have any questions or concerns regarding your rights as a research subject, please contact the Research Subject Information Line in the UBC Office of Research Studies at.

Consent:

I agree to take part in this study of the experience of shame and guilt in relation to the body. The requirements of the study have been explained to me and I understand what is involved.

Your participation in this study is entirely voluntary and you may withdraw or refuse participation at any time without penalty.

I am willing to take part in this study, and I understand that the process will take approximately 20-30 minutes.

Your consent to participate in this study is assumed once you have initiated the questionnaire.

Appendix D – Demographics

Height_____(cm)_____(inches)

Weight_____(lbs)_____(kg)

Date of birth (month/date/year): _____

Sociocultural information:
                    How would you describe yourself? You may mark more than one

_____Aboriginal   _____Latin American

_____Arab   _____South Asian (e.g., East Indian, Pakistani, Sri Lankan, etc.)

_____Black   _____Southeast Asian (e.g, Vietnamese, Cambodian, Malaysian, etc.)

_____Chinese   _____West Asian (e.g., Iranian, Afghan, etc.)

_____Filipino   _____White

_____Japanese   _____Other – please specify
_____

_____Korean

Parental education level (please check highest level attained)

Father	**Mother**	
□	□	did not graduate high school
□	□	graduated from high school
□	□	some college/university education
□	□	graduated from college/university
□	□	not sure

Appendix E – Body-related negative emotions questionnaire

<u>Physical self-description questionnaire</u>

This questionnaire is designed to assess how individuals perceive their body in the areas of body fat and global physical appearance. There are no right or wrong answers, please answer each question in accordance with the way you feel about your body <u>right now.</u>

Please read each sentence carefully and circle the appropriate response. There are six possible responses (numbered 1-6) for each question, 1=false, 2=mostly false, 3=more false than true, 4=more true than false, 5= mostly true, 6=true. Only one number should be circled per question, choose the number that best corresponds to the way you are feeling about your body <u>right now</u>.

	False	Mostly false	More false than true	More true than false	Mostly true	True
1. I am too fat.	1	2	3	4	5	6
2. I am satisfied with the kind of person I am physically.	1	2	3	4	5	6
3. My waist is too large.	1	2	3	4	5	6
4. Physically I am happy with myself.	1	2	3	4	5	6
5. I have too much fat on my body.	1	2	3	4	5	6
6. I feel good about the way that I look and what I can do physically	1	2	3	4	5	6

	False	Mostly false	More false than true	More true than false	Mostly true	True
7. I am overweight.	1	2	3	4	5	6
8. Physically I feel good about Myself.	1	2	3	4	5	6
9. My stomach is too big.	1	2	3	4	5	6
10. I feel good about who I am and what I can do physically.	1	2	3	4	5	6
11. Other people think that I am fat.	1	2	3	4	5	6
12. I feel good about who I am physically.	1	2	3	4	5	6

(Marsh, Richards, Johnson, Roche, & Tremayne, 1994)

Appendix F- Shame and guilt proneness

TOSCA-S

   Below are situations that people are likely to encounter in day-to-day life, followed by several common reactions to those situations.

        As you read each scenario, try to imagine yourself in that situation. Then indicate how likely you would be to react in each of the ways described. We ask you to rate all responses because people may feel or react more than one way to the same situation, or they may react different ways at different times.

For example:

A. You wake up early one Saturday morning. It is cold and rainy outside.

   a) You would telephone a friend to catch up on news.   (1)--2----3----4----5
                                                             not likely   very likely

   b) You would take the extra time to read the paper.   1----2----3----4(---5)
                                                             not likely   very likely

   c) You would feel disappointed that it's raining.   1----2-(--3)---4----5
                                                             not likely   very likely

   d) You would wonder why you woke up so early.   1----2----3-(--4)---5
                                                             not likely   very likely

        In the above example, I've rated ALL of the answers by circling a number. I circled a "1" for answer (a) because I wouldn't want to wake up a friend very early on a Saturday morning -- so it's not at all likely that I would do that. I circled a "5" for answer (b) because I almost always read the paper if I have time in the morning (very likely). I circled a "3" for answer (c) because for me it's about half and half. Sometimes I would be disappointed about the rain and sometimes I wouldn't -- it would depend on what I had planned. And I circled a "4" for answer (d) because I would probably wonder why I had awakened so early.

1. <u>You make plans to meet a friend for lunch. At 5 o'clock, you realize you stood him up.</u>

   a) You would think: "I'm inconsiderate."   1----2----3----4----5
                                                   not likely   very likely

   b) You would think: "Well, they'll understand."   1----2----3----4----5
                                                 not likely   very likely

   c) You'd think you should make it up to him as soon   1----2----3----4----5
     as possible.   not likely   very likely

   d) You would think: "My boss distracted me just   1----2----3----4----5
     before lunch."   not likely   very likely

2. <u>You break something at work and then hide it.</u>

   a) You would think: "This is making me anxious. I   1----2----3----4----5
     need to either fix it or get someone else to."   not likely   very likely

   b) You would think about quitting.   1----2----3----4----5
                                             not likely   very likely

   c) You would think: "A lot of things aren't made   1----2----3----4----5
     very well these days."   not likely   very likely

   d) You would think: "It was only an accident."   1----2----3---4----5
                                        not likely   very likely

3. <u>At school, you wait until the last minute to plan a project, and it turns out</u>
<u>badly.</u>

   a) You would feel incompetent.   1----2----3----4----5
                                           not likely   very likely

   b) You would think: "There are never enough hours   1----2----3----4----5
     in the day."   not likely   very likely

   c) You would feel: "I deserve to be reprimanded for   1----2----3----4----5
     mismanaging the project."   not likely   very likely

   d) You would think: "What's done is done."   1----2----3----4----5
                                         not likely   very likely

4. <u>You make a mistake at school and find out a fellow student is blamed for the error.</u>

a) You would think the teacher did not like the
   student.

    1----2----3----4----5
    not likely   very likely

b) You would think: "Life is not fair."

    1----2----3----4----5
    not likely   very likely

c) You would keep quiet and avoid the student.

    1----2----3----4----5
    not likely   very likely

d) You would feel unhappy and eager to correct the
   situation.

    1----2----3----4----5
    not likely   very likely

5. <u>While playing around, you throw a ball and it hits your friend in the face.</u>

a) You would feel inadequate that you can't even
   throw a ball.

    1----2----3----4----5
    not likely   very likely

b) You would think maybe your friend needs more
   practice at catching.

    1----2----3----4----5
    not likely   very likely

c) You would think: "It was just an accident."

    1----2----3----4----5
    not likely   very likely

d) You would apologize and make sure your friend
   feels better.

    1----2----3----4----5
    not likely   very likely

6. <u>You are driving down the road, and you hit a small animal.</u>

a) You would think the animal shouldn't have been
   on the road.

    1----2----3----4----5
    not likely   very likely

b) You would think: "I'm terrible."

    1----2----3----4----5
    not likely   very likely

c) You would feel: "Well, it was an accident."

    1----2----3----4----5
    not likely   very likely

d) You'd feel bad you hadn't been more alert
   driving down the road.

    1----2----3----4----5
    not likely   very likely

7. <u>You walk out of an exam thinking you did extremely well. Then you find out
 you did poorly.</u>

  a) You would think: "Well, it's just a test."   1----2----3----4----5
                                                          not likely   very likely

  b) You would think: "The instructor doesn't like me."   1----2----3----4----5
                                                          not likely   very likely

  c) You would think: "I should have studied harder."   1----2----3----4----5
                                                          not likely   very likely

  d) You would feel stupid.   1----2----3----4----5
                                                            not likely   very likely

 8. <u>While out with a group of friends, you make fun of a friend who's not there</u>

  a) You would think: "It was all in fun; it's harmless."   1----2----3----4----5
                                                         not likely   very likely

  b) You would feel small...like a rat.   1----2----3----4----5
                                                        not likely   very likely

  c) You would think that perhaps that friend should   1----2----3----4----5
    have been there to defend himself/herself.   not likely very likely

  d) You would apologize and talk about that person's 1----2----3----4----5
    good points.   not likely very likely

9. <u>You make a big mistake on an important project at school. People were depending on you,
and your teacher criticizes you.</u>

  a) You would think your teacher should have been   1----2----3----4----5
    more clear about what was expected of you.   not likely very likely

  b) You would feel like you wanted to hide.   1----2----3----4----5
                                                       not likely very likely

  c) You would think: "I should have recognized the   1----2----3----4----5
    problem and done a better job."   not likely very likely

  d) You would think: "Well, nobody's perfect."   1----2----3----4----5
                                                not likely very likely

10. <u>You are taking care of your friend's dog while they are on vacation and the dog runs away.</u>

    a) You would think, "I am irresponsible and   1----2----3----4----5
       incompetent."   not likely   very likely

    b) You would think your friend must not take very   1----2----3----4----5
       good care of their dog or it wouldn't have run   not likely   very likely
       away.

    c) You would vow to be more careful next time.   1----2----3----4----5
                                                not likely   very likely

    d) You would think your friend could just get a   1----2----3----4----5
       new dog.   not likely   very likely

11. <u>You attend your friend's housewarming party and you spill red wine on their new cream-colored carpet, but you think no one notices.</u>

    a) You think your co-worker should have expected   1----2----3----4----5
       some accidents at such a big party.   not likely   very likely

    b) You would stay late to help clean up the stain   1----2----3----4----5
       after the party.   not likely   very likely

    c) You would wish you were anywhere but at   1----2----3----4----5
       the party.   not likely   very likely

d) You would wonder why your friend chose to   1----2----3----4----5
       serve red wine with the new light carpet.   not likely   very likely

(Tangney & Dearing, 2002; Tangney, Dearing, Wagner, & Gramzow, 2000)

Appendix G – Hypothetical scenario

Scenario

Instructions: Please read the following passage; as you are reading try to imagine yourself in the scenario as much as possible. Try to imagine how you would feel and what you would be thinking in this circumstance.

You feel panic as you realize that summer, the season of swimsuits and body-revealing clothing is only a few weeks away. Over the past few months you've been busy with schoolwork and studying for exams, you haven't been physically active, and you've been eating a lot of junk food and fast food. Most of your clothing has gotten too tight and you feel it no longer looks good on you. You decide to go on a shopping trip with your best friend Emily. While trying on clothes you are shocked to discover that you've gone up two whole dress sizes, and you feel that nothing you try on looks good on your new larger body. Dismayed, you turn to Emily, while grabbing a handful of your flabby stomach for emphasis, and complain that you need to get in shape. Emily laughs and nods in agreement, and convinces you to go with her to an aerobics class that night. When you arrive at aerobics class, you immediately begin to have second thoughts as you notice how toned everyone is, but you decide to stick it out. In the change room, you feel like everyone's eyes are on you, scrutinizing your body, and you try to change as quickly as possible. A few minutes into the aerobics class and you're sure you hear someone behind you making a negative comment about your body shape. When the class finally ends, you change quickly and leave.

Appendix H – Manipulation check

<u>**Scenario check**</u>

Now if you could please answer a couple of questions pertaining to the hypothetical scenario that you have just read.

Instructions: Please rate, on a scale of 1-7, with 1= strongly disagree, and 7= strongly agree, the level of which you agree or disagree with the following statements. Please circle the appropriate number response using the scale directly below each question.

1. I was able to picture myself in the scenario.

Strongly	Disagree	Somewhat	Neither agree	Somewhat	Agree	Strongly
Disagree		Disagree	Nor disagree	Agree		Agree
1	2	3	4	5	6	7

2. I would feel distress if the events in the scenario were to happen to me.

Strongly	Disagree	Somewhat	Neither agree	Somewhat	Agree	Strongly
Disagree		Disagree	Nor disagree	Agree		Agree
1	2	3	4	5	6	7

Appendix I – State shame and guilt

Emotion scale

Please answer the following questions with the scenario you have just read in mind. Answer the questions based on how you were feeling as you imagined yourself in the preceding scenario.

The following are some statements which may or may not describe how you felt as you read this scenario. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you were feeling as you imagined yourself in this scenario.

	Not feeling this way at all		Feeling this way somewhat		Feeling this way strongly
1. I wanted to sink into the floor and disappear.	1	2	3	4	5
2. I felt remorse, regret.	1	2	3	4	5
3. I felt small.	1	2	3	4	5
4. I felt tension about something I had done.	1	2	3	4	5
5. I felt like I was a bad person.	1	2	3	4	5
6. I couldn't stop thinking about something bad I had done.	1	2	3	4	5
7. I felt humiliated, disgraced.	1	2	3	4	5
8. I felt like apologizing, confessing.	1	2	3	4	5
9. I felt worthless, powerless.	1	2	3	4	5
10. I felt bad about something I have done.	1	2	3	4	5

(Marschall, Sanftner, & Tangney, 2004)

Appendix J - Attributions

<h2 style="text-align:center">Attribution scale</h2>

Instructions: Please answer the following questions with the preceding scenario in mind. Try to answer the questions based on how you were feeling as you imagined yourself in that scenario and the reasons for these feelings.

In general, is this reason for your feeling these emotions something that.....

	Not At all	a little	somewhat	a lot	completely
1. you could control in the future	1	2	3	4	5
2. remains stable across time	1	2	3	4	5
3. you feel remains constant over time	1	2	3	4	5
4. in the future, you could exert control over	1	2	3	4	5
5. relates to a number of different situations You encounter	1	2	3	4	5
6. does not fluctuate across situations	1	2	3	4	5
7. affects a wide variety of outcomes for you	1	2	3	4	5
8. in the future, you could change at will	1	2	3	4	5
9. influences the outcomes of new situations You face	1	2	3	4	5
10. you could regulate in the future	1	2	3	4	5
11. stays consistent across time	1	2	3	4	5
12. influences all situations you encounter	1	2	3	4	5

(Coffee & Rees, 2008)