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The relation of body image guilt, shame, behavioral self-blame, and characterological
self-blame to depression in children and adolescents

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Abstract

This study examines the relation between adolescent depression, shame/characterological self-blame, and body image. It addresses the question: Do adolescents' attributions and feelings about their body image make them more prone to depression? We hypothesized that shame and characterological self-blame make adolescents more prone to depression than adolescents engaging in guilt and behavioral self-blame. We also hypothesized that younger children and adolescents would differ in the degree to which shame/characterological self-blame relate to their body images. We are also exploring whether or not there is a gender difference in children engaging in body image shame or characterological self-blame. We evaluated 243 fourth graders and ninth graders concerning their feelings about body image, guilt/shame, behavioral/characterological self-blame, and depression. Body image guilt/shame and BSB/CSB displayed convergent and discriminant validity. Body image shame and CSB predicted depression above and beyond the conventional measures of shame and CSB. The interaction of sex and body image guilt/shame and CSB/BSB measures did not affect depression. There was weak support, however, for a gender effect on levels of body image guilt/shame and body image BSB/CSB. Also, older children had lower scores on some guilt, CSB, and BSB subscales.

The relation of body image guilt, shame, behavioral self-blame, and characterological self-blame to depression in children and adolescents

A strong relation is found to exist between body image and depression in adolescence (Kaplan, Busner, & Pollack, 1988; Kostanski & Gullone, 1998; Rierdan & Koff, 1997). Substantial literature suggests that lurking behind this correlation is a societal and media emphasis on thinness (Hargreaves & Tiggemann, 2004). Physical changes during puberty, however, often thwart thinness and increase adolescent self-consciousness (Davison & McCabe, 2006; Rierdan & Koff, 1997). A smaller literature suggests that one's attributions about one's body may moderate the connection between body image and depression (Thompson, Dinnel, & Dill, 2003). The relation between body image and depression may be even stronger for a subset of people who make characterological self-blaming attributions about their bodies. Conversely, the relation may be weaker among individuals who make more behavioral self-blaming attributions. Recent research by Tilghman-Osborne et al. (2008) suggests that guilt and shame may be closely related to behavioral and characterological self-blame, especially insofar as depression is concerned. Thus, the two goals of the current study are (1) to test the hypothesis that body image guilt and shame moderate the relation between body image and depression in adolescents, and (2) to assess the discriminant validity of body image guilt/shame in relation to measures of nonspecific guilt/shame and behavioral/characterological self-blame.

Despite evidence that shame and depression, characterological self-blame and depression, and body image and depression are related, the cumulative relation between the concepts of guilt/shame, characterological/behavioral self blame, and body image has

not yet been established within the literature. To clarify, is the way adolescents are attributing and feeling about their body image leading to the development of depression? Furthermore, is shame or characterological self-blame more correlated to depression in girls or boys? Can one see cognitive changes in the way children attribute blame? To answer these questions, this study seeks to see if there is a difference between boys and girls' attribution styles and body dissatisfaction over time. Some data suggest that females have worse body images than males (Davison & McCabe, 2006; Rierdan & Koff, 1997). There are also data, however, showing that males may be affected by body image more than what has been acknowledged in the past (Cohane & Pope, 2001). This study will also assess developmental changes in how children and adolescents attribute blame by studying 4th and 9th graders.

In order to answer these questions raised by this study, one must first look closely at literature regarding guilt and shame. To begin, shame is “an emotion stemming from public exposure of some transgression or shortcoming [while] guilt is viewed as a ‘private’ experience involving pangs of one’s own conscience” (Tangney, 1996, pp. 742). Identical situations can evoke shame or guilt; the difference lies in how the individual interprets these events. To the individual, is the situation an exhibition of their self (shame) or something situational which the individual can change (guilt)? With shame, the individual places an emphasis on one’s “bad self” versus the bad behavior (Tangney, 1996, pp. 742). Furthermore, shame extends to “a sense of exposure”; the individual thinks about how one might look to others (Tangney, Wagner, & Gramzow, 1992). On the other hand, Tangney (1996) explains that in guilt, the person does not focus on themselves but rather the event or thing that caused the negative evaluation. Also, the

focus is the action that was done and motivation to change that negative behavior. Thus, guilt is considered to be constructive, unlike shame.

Shame, on the other hand, can be destructive and is related to depression. For instance, when Smith (1972) looked at severely depressed patients, he saw that many of their memories had more shame themes than guilt themes. Furthermore, some data indicated that shame and guilt proneness were also related to depression (Harder & Lewis, 1987; Hoblitzelle, 1987). Tangney's (1992) study of 1,245 undergraduates found that participants considered to be shame-prone were more likely to be psychologically maladjusted. Guilt-proneness, however, was only moderately related to psychopathology. Tangney further explained that "shame-proneness is linked to a depressogenic attributional style. Proneness to shame was positively correlated with the tendency to make internal, stable, and global attributions for negative events and negatively correlated with internal, stable, and (to a lesser extent) global attributions for positive events" (Tangney et al., 1992, page 474). Their findings indicate that those who are shame-prone are more vulnerable to depression, than those who are guilt-prone.

Conceptually related to shame and guilt are the constructs of characterological and behavioral self-blame. Much like shame, characterological self-blame focuses on one's character, which the person considers is something that cannot be changed. Behavioral self-blame focuses on one's behavior and a person sees behavior as something modifiable. When the action is blamed on the person's self and inability to control something, it is characterological self-blame. When the blame is placed on the situation and the controllability of the situation, it is behavioral self-blame. Janoff-Bulman (1979) explains that "individuals who engage in characterological self-blame are apt to focus

more on the past and what it was about them that rendered them deserving of the negative outcome for which they are blaming themselves” (pp. 1800). Behavioral self-blame is linked to an attribution style that can be described as internal, unstable, and controllable whereas characterological self-blame is internal, stable, and uncontrollable (Graham & Juvonen, 1998).

Thus, one can see that characterological self-blame, rather than behavioral self-blame, is related to depression. In Janoff-Bulman’s (1979) study of 129 undergraduates, depressed students showed more characterological self-blame than did nondepressed students. Furthermore, Janoff-Bulman’s (1979) research on rape victims shows that victims who engaged in behavioral self-blame coped better with the crisis of a rape because they believed that the situation was controllable. For instance, they believed that if they engaged in fewer behaviors, like walking alone at night, another rape could be prevented. Graham and Juvonen (1998) make the point that “individuals who make characterological attributions for negative outcomes cope more poorly, feel worse about themselves, and are more depressed than individuals who make behavioral self-attributions” (pp. 588). Anderson’s (1983) study of college students also found that students who attributed events more to their selves and uncontrollable events were more likely to be depressed than those who attributed blame to more behavioral factors. Relatively few studies have examined the relation between self-blame and depression in children and adolescents. Research done by Cole et al. (1996), however, showed that by the ninth grade, adolescents who have higher levels of characterological self-blame usually rate higher on depression. Thus, the current study also seeks to gain more data on adolescents and understand the relation between self-blame and depression in respect to

this age group while also evaluating developmental changes that occur from childhood to adolescence.

Overall, there seems to be a relation between shame/guilt and characterological self-blame/ behavioral self-blame. Tilghman-Osborne et al. (2008) looked at whether or not these terms can be used simultaneously (shame and characterological self-blame; guilt and behavioral self-blame). As Tilghman-Osborne et al. (2008) stated, “With their adaptive natures, their focus on action, and their negative relation to depression, guilt and BSB (behavioral self-blame) have much in common. Similarly, shame and CSB (characterological self-blame) seem to share a maladaptive theme, a focus on the self, and a positive relation to depression and other negative outcomes” (pp. 5). Researchers like Tangney (1992) are also interested in the relation between these two concepts.

In adolescence, a common focus of shame is one’s body (Davison & McCabe, 2006). About 60% of girls and 30% of boys say they would like to change the size or shape of their bodies (Presnell, Bearman, & Stice, 2004). Also, about 25% of girls report “clinically significant levels” of body dissatisfaction, meaning this dissatisfaction can cause emotional distress and increases risk for psychopathology (Presnell et al., 2004). The ideal for girls is to be thin and slim. Media and even families encourage females to lose weight and look like models on television. Many times, girls internalize these sociological views of beauty and strive for this body type. Much like girls, many boys also wish to lose weight and suffer from body dissatisfaction (Davison & McCabe, 2006). On the other hand, some adolescent boys wish to gain body mass and muscle and their thinness is the reason for their dissatisfaction. Boys, especially underweight ones, have body image problems like girls (Davison & McCabe, 2006). Hargreaves and Tiggemann

(2004) analyzed how the media and its commercials that portray ideal body types cause boys and girls to compare themselves to these ideals. In their study, the behavior of comparing one's body to media ideals led to an increased negative mood for boys and girls. Girls, however, were affected more by this comparison than were boys. Also, adolescents tend to have a "heightened self-consciousness and concerns about how peers evaluate them" (Davison & McCabe, 2006, pp. 16). Thus, with the many pubertal changes that adolescents undergo, they may drift from their ideals and experience negative peer evaluations. Furthermore, adolescents' self-worth and relationships could be related to their body images. Davison and McCabe (2006) suggest that when an adolescent has a negative body image, this can "hamper adolescents' development of interpersonal skills and positive relations with other boys and girls" because adolescents are worried about how they appear to their peers (pp. 17). Adolescents want to fit in and a negative body image can hinder this process. These unrealistic body images may play an important role in adolescent depression.

As Rierdan and Koff (1997) point out, it is normal for girls to have a significant increase in fat and weight during puberty and this often causes a decrease in body dissatisfaction. Their research showed that it was not actually the amount of fat or weight of a girl that is related to depressive symptoms, but something more subjective: body satisfaction. Weight satisfaction and weight concerns were related to depressive symptoms in adolescent girls rather than the girls' actual weight (Rierdan & Koff, 1997). A finding by Davies and Furnham (1986) stated that as girls grew older from ages 12-18, their satisfaction with their body measurements decreased. Furthermore, a study by (Kaplan et al., 1988) showed that adolescents who felt they were in the normal weight

range were less depressed than adolescents who thought they were underweight or overweight. In Kostanski and Gullone's study (1998) perceived body image dissatisfaction was correlated with levels of self-esteem, anxiety, and depression. Thus, literature points to a relation between body image dissatisfaction and depression.

Research consistently shows that females are more deeply affected by body dissatisfaction (Annis, Cash, & Hrabosky, 2004; Davison & McCabe, 2006; Rierdan & Koff, 1997). Nevertheless, other literature suggests an increase in body image concerns in males (Cohane & Pope, 2001). In a study by Cohane and Pope (2001), 45% of boys wanted to change their weight; about 38% of these boys wanted to be thinner and 7% wanted to gain weight. This study did agree with the idea that boys do show less dissatisfaction than girls, but there is a large amount of boys who are not happy with their bodies and this conclusion has been overlooked in the past. Due to the controversy on this topic, this study will also compare gender differences in relation to body image.

Not only is their personal dissatisfaction associated with being overweight, but also stigma. Crocker, Cornwell et al. (1993) suggest that there are three types of social stigma: tribal stigma, abominations of the body, and blemishes of individual character. The important point is that being overweight carries with it two types of stigma: abominations of the body and blemishes of the individual character. People tend to look down on those who are overweight, regarding them as people who lack self-control and are unattractive. They are stereotyped as "aesthetically displeasing, morally and emotionally impaired, and socially handicapped" (Crocker et al., 1993, pp. 60). An interesting study by Musher-Eizenman et al. (2004) shows that even preschool children believe that other children

who are overweight have a “more negative personality and behavioral characteristics” than other children who are within a normal weight range.

By examining the relation between age and attribution of blame, we can also look at what role physical development plays in cognitive changes in children. Since children are going through cognitive changes as they grow older, it is interesting to see whether or not these changes are evident in the way they attribute blame. One can see a variety of cognitive changes from childhood to adolescence (Linn & Songer, 1991). First, Cole et al. (1996) explain that when younger children fail, their failures do not include the same type of helplessness that older children feel. Thus, “younger children’s characterological self-blame may not carry with it the same depressotypic overtones, when compared to older children” (Cole et al., 1996, pp. 383). Also, Ferguson et al. (1991) point out that children below the ages of 12-13 cannot consistently differentiate between guilt and shame. Second, as children become adolescents, they gain an increased awareness of norms and ideals. Norms become more important and prevalent in adolescent’s lives (Linn & Songer, 1991). Flitner (1966) explains that adolescents are being assimilated into the adult world and into “the existing system of values and orders” (pp. 228). Third, adolescence is accompanied by a sexual awakening (Baumeister, Kahn, & Tice, 2001; Flitner, 1966). This interest in sexuality causes many adolescents to feel that their physical appearance is more important than it was during childhood. Finally, another cognitive change is that adolescents perceive negative events in their lives to be more stable and global than children (Cole et al., 1996). For all of these reasons, it is necessary to look at adolescents and compare their attribution styles to those of children.

Overall, body image is thought to play a critical role in adolescent depression. Thus, the two general goals of the current study are (1) to examine body image guilt and shame and body image CSB and BSB in relation to depression and (2) to see the effects of age and gender on these constructs. The current study hopes to answer these questions to better explain the origins of adolescent depression.

Methods

Participants

A total of 243 children and adolescents participated in this study. The students either came from a fourth grade elementary class or its feeder high school in Murfreesboro, TN. To recruit these participants, we sent consent forms to the entire fourth grade class at the elementary school and to all 9th grade students enrolled in a health class. Of the 580 students contacted, 248 parents consented to their children participating in this study. The total sample comprised of 95 fourth graders, 128 ninth graders, 3 sophomores, and 1 senior. Overall, there was a slight overrepresentation of females in this study (57% girls and 43% boys). However, 63% (60) of the 4th graders were male while only 30% (44) of the high school students were male. Consistent with the local population, the sample was 78.2% white, 9.1% Black, 5.3% Hispanic, 4.9% Asian, 4.1% Native American, 3.3% as other.

Measures

For the current study, we used 6 measures. One was a measure of guilt and shame. One was a measure of attributional self-blame. Two were measures of bodily guilt and shame. One was a measure of bodily self-blame. One was a measure of depressive symptoms.

Guilt and Shame measure

The measure of guilt and shame was the Test of Self-Conscious Attitudes-Adolescent version (TOSCA-A). The TOSCA-A (Tangney, Wagner, Gavlas, & Gramzow, 1991) is a self-report comprised of 15 scenarios (10 negative, 5 positive) that measure guilt and shame in adolescents. The scenarios are daily events the participant may encounter (e.g., You trip in the cafeteria and spill your friend's drink; At school, you wait until the last minute to plan a project, and it turns out well.) The instructions ask the participant to imagine being in that position and to rate each response item on a 5-point Likert scale ranging from 1 ("Not at all likely") to 5 ("Very likely.") A guilt response to a scenario would be "I would feel very sorry. I should have watched where I was going," whereas a shame response would be "I would be thinking that everyone is watching me and laughing." The original version contains response items dealing with Shame-proneness, Guilt-proneness, Externalization, Detachment/Unconcern, Alpha Pride, and Beta Pride. Since the current study focuses on guilt and shame, the other response items were removed to create a shorter version of the TOSCA-A assessing only guilt-proneness and shame-proneness. The TOSCA-A demonstrates high internal consistency ($\alpha = 0.77$ and $\alpha = 0.81$ for shame and guilt, respectively) test-retest reliability, predictive, and convergent validity (Tangney, 1996; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). In the current study, internal consistencies were high for both subscales ($\alpha = .76$ for the shame subscale and $\alpha = .84$ for the guilt subscale).

Characterological and Behavioral Self-Blame measure

Our measure of self-blame was the Attributional Blame Questionnaire (ABQ). The ABQ (Tilghman-Osborne et al., 2008) is a 4-scenario self-report measure of

behavioral and characterological self-blame (BSB and CSB). The scenarios are daily events that children or adolescents may encounter (e.g. Imagine that you are giving a report in front of the class. When you start to talk to the class, you say something that doesn't make sense. The teacher and your classmates all look really confused. Some kids even laugh at you.). Each scenario is followed by 12 response items that assess BSB and CSB (6 responses measure BSB and 6 measure CSB for a total of 24 BSB items and 24 CSB items in all). An example of a characterological self-blame response is, "This happens because I am not a very good student." An example of a behavioral self-blame response is, "I should have studied harder!" Each response is rated on a 5-point Likert scale (1= Definitely would NOT think and 5=Definitely would think). In one previous study, the measure demonstrated high levels of internal consistency, test-retest reliability, and convergent validity (Tilghman-Osborne et al., 2008). In the current study, internal consistency was high ($\alpha = .84$ for the BSB subscale and $.88$ for the CSB subscale).

Bodily Guilt and Shame measures

Our first measure of bodily guilt and shame was the Body Image Guilt and Shame Scale (BIGGS). The BIGGS (Thompson et al., 2003) is a 15-item self-report measure of guilt and shame in respect to body image. The scenarios are daily events dealing with body image that participants may encounter (e.g. Your partner expresses disappointment over your body). Each scenario is followed by response items assessing shame, guilt, externalization/rationalization, and detachment. Since the current study focuses on guilt and shame, the other response items were removed to create a shorter version of the BIGGS assessing only guilt-proneness and shame-proneness. Each response item is rated on a 5-point Likert scale (1=Not likely and 5=Very likely). Typical response items

include, “You would attribute your partner’s disapproval to your failure to keep trim” (guilt) and “You would feel diminished in your image of yourself,” (shame). Due to the complicated language in the BIGGS, it was reworded to be more suitable for children and adolescents. For instance, the scenario “Your partner expresses disappointment over your body” was reworded to “Your boyfriend/girlfriend says he/she is unhappy with your body.” The BIGGS demonstrates high internal consistency ($\alpha=0.88$ and $\alpha=0.91$ for shame and guilt, respectively) and construct validity, correlating highly with other measures of guilt, shame, body concerns, and identity (Thompson et al., 2003). Levels of internal consistency were high for this study ($\alpha =.87$ for the guilt subscale and $\alpha =.91$ for the shame scale).

Our second measure of bodily guilt and shame was the Test of Self-Conscious Affect- Body Image (TOSCA-BI). The TOSCA-BI is a self-report comprised of 15 scenarios (10 negative, 5 positive) designed for this study to measure guilt and shame in respect to body image. This questionnaire was modeled after the TOSCA-A and used the same format as the original questionnaire with changes made to the scenarios and responses. An example body image scenario is, “You get on a weighing scale and the weight shown is five pounds more than you thought you weighed.” Each scenario is followed by a guilt and shame response item. Example response items are, “I would feel very bad. I should have watched my weight (guilt),” and “I would feel that I am careless and an unhealthy person (shame).” Responses were rated on a 5-point Likert scale (1=“Not at all likely” and 5=“Very likely”). Internal consistency for this study was high ($\alpha =.80$ for the guilt subscale and $.86$ for the shame scale).

Bodily Self-Blame measure

Our measure of bodily self-blame was the Attributional Blame Questionnaire-Body Image (ABQ-BI). The ABQ-BI is a 4-scenario self-report questionnaire designed for this study to measure BSB and CSB in respect to body image. This measure follows the format of the original ABQ but contains scenarios that deal with body image (e.g. Imagine that you see one of your favorite aunts after a long time. When she sees you, she gives you a hug and says that you've put on a bit of weight). The scenarios are followed by 13 response items that assess BSB and CSB and follow the original ABQ as closely as possible. The responses were rated on a 5-point Likert scale (1=Definitely would NOT think and 5=Definitely would think). Internal consistency was high in this study ($\alpha = .93$ for the BSB subscale and $\alpha = .91$ for the CSB subscale).

Depressive symptoms measure

Our measure of depressive symptoms was the Children's Depression Inventory (CDI). The CDI (Kovacs, 1981, 1985) is a 27-item self-report measure of depression in children. The scale asks the participant to check one of three responses that best characterizes the participant's feelings or behaviors in the last 2 weeks (e.g. I am sad once in awhile, I am sad many times, or I am sad all the time). The CDI is scored with a 0, 1, or 2 respective to the increasing severity of the responses. This measure has been used widely and displays high levels of internal consistency, test-retest validity, predictive, convergent, and construct validity especially in nonclinical populations (Carey, Faulstich, Gresham, Ruggiero, & Enyart, 1987; Cole et al., 1996; Kazdin, French, & Unis, 1983; Kovacs, 1985; Lobovits & Handal, 1985; Mattison, Handiford, Kales, Goodman, & McLaughlin, 1990; Saylor, Finch, Spirito, & Bennett, 1984; Smucker,

Craighead, Craighead, & Green, 1986; Worchel et al., 1990). In the current study, the Chronbach's alpha was .89.

Procedures

For the current study, we administered two sets of packets to participants. Roughly half completed a packet that did not include any of the ABQ measures. The other half completed a packet that did not include any of the TOSCA-A measures. With the 4th graders, trained doctoral psychology students, advanced undergraduate students, and recruited research assistants separated the children into two groups in the school cafeteria. One assistant read the ABQ packet aloud to one group while another assistant read the TOSCA-A packet to the other group. The other eight research assistants circulated around the room to answer questions and assist participants. At the high school, the two sets of packets were handed out to the students and the participants were able to complete the packet at their own pace. Three research assistants were available to answer any questions during the testing.

Results

Preliminary Analyses

Table 1 displays the descriptive statistics for the study measures. The means and standard deviations were comparable to means and standard deviations in other studies (Peeke, 1995; Tangney, 1992; Tangney & Dearing, 2002; Tilghman-Osborne et al., 2008). Tables 2 through 4 display the factor analysis results for the three body image measures, ABQ-BI, BIGGS, and TOSCA-BI. We ran principle axis factor analysis using oblique rotations. Using the Kaiser criterion, we found two factor solutions for the three body image measures. Based on the factor loadings, we dropped items B and J from the

ABQ-BI. (Three of the four B items loaded incorrectly while 1 of the 4 J items loaded incorrectly and 3 crossloaded). Dropping these eight items left us with 16 BSB items and 20 CSB items. The BSB and CSB items were made into packets which loaded correctly as seen in Table 2. Three shame or guilt items were assigned to their respective packets in order to analyze the BIGGS. All items loaded as expected and the loadings are displayed in Table 3. Either part A or part B of Items 1, 6, 8, and 11 of the TOSCA-BI loaded incorrectly. Thus, each scenario was dropped. Items 4a, 12b, and 15b crossloaded, but weakly loaded to the correct construct of either shame or guilt. Thus, these specific items were discarded but their counterparts were kept in the analysis, leaving us with 10 shame items and 9 guilt items. The loadings are displayed in Table 4.

Table 5 shows the correlations between all of our measures. Glancing at the correlation matrix reveals some important convergences and divergences among the measures. Overall, there is a high degree of convergence between the first five measures which are shame and CSB measures ($r = 0.41$ to 0.78). These measures include the body image shame and CSB measures as well as conventional measures of shame and CSB. The body image measures converge with each other ($r = 0.60$ to 0.78) and show some divergence from conventional measures of shame and CSB. Body image shame and CSB measures correlated at a lower level with conventional measures of shame and CSB ($r = 0.41$ to 0.60).

Body image guilt and BSB measures showed a high degree of convergent validity, correlating from 0.60 to 0.66 with each other. These correlations were stronger than those between these measures and measures of conventional guilt/BSB ($r_s = 0.26$ to 0.53), suggesting a degree of discriminant validity. Overall, body image measures

converged with one another ($r= 0.40$ to 0.78). All shame and CSB measures correlate highly with depression (r s range from 0.19 to 0.48). However, body image measures of shame and CSB correlate more highly with depression ($r= 0.38$ to 0.48) than conventional measures of shame and CSB with depression ($r= 0.19$ to 0.48). The BIGGS guilt measure was the only body image or conventional measure of guilt or BSB which correlated to depression ($r= 0.19$).

Goal 1

Our first goal was to examine the relation of conventional guilt, shame, BSB, and CSB measures and body image guilt, shame, BSB and CSB measures to depression. Specifically, we had 3 main hypotheses: We hypothesized that (1) all body image and conventional measures would correlate with depression, (2) body image guilt and shame would predict concurrent depression over-and-above their conventional counterparts, (3) body image BSB and CSB would predict concurrent depression over-and-above their conventional counterparts.

In order to test the first hypothesis, we ran correlations between each of our measures and a measure of depressive symptoms. In partial support of our hypothesis, almost half of the subscales did correlate with depression. All body image and conventional shame and CSB subscales correlated with depressive symptoms, whereas only one of the guilt or BSB subscales did. The body image shame/CSB measures, (BIGGS Shame, TOSCA-BI Shame, and ABQ-BI subscales) had the strongest correlations with depression ($r= 0.38$ to 0.48). The conventional shame and CSB subscales (TOSCA-A shame and ABQ-CSB) correlated positively with depressive symptoms ($r= 0.19$ and 0.48 , respectively), but more weakly than their body image

counterparts ($r=.0.38$ and 0.48 , respectively). Only one of the body image guilt/BSB measures (BIGGS Guilt) correlated with depressive symptoms ($r = 0.19$). None of the other body image or conventional guilt and BSB measures correlated with depression.

In order to test the second hypothesis, we ran 4 sets of regressions. In the first two sets, we regressed depression onto TOSCA-A shame in the first step and then added either TOSCA-BI shame or BIGGS shame in the second step. In the second set of regressions we did the same with guilt; we entered the TOSCA-A guilt first and then either the TOSCA-BI guilt or BIGGS guilt second. Examples of these regressions are

$$\text{Step 1: DEP} = \beta_0 + \beta_1 \text{ TOSCA-A shame}$$

$$\text{Step 2: DEP} = \beta_0 + \beta_1 \text{ TOSCA-A shame} + \beta_2 \text{ TOSCA-A-BI shame.}$$

In both regressions using shame, body image measures accounted for more of the variance in depression than did the TOSCA-A shame. The betas for body image were moderately strong ($\beta = .39$ and $\beta = .35$) and the change in R^2 was significant in both models (R^2 s = $.14$; see Models 1&2 of Table 6). With the 2 sets of regressions using guilt (Models 4 and 5), only the one with BIGGS guilt predicted depression over above the TOSCA-guilt ($\beta = .28$, $R^2 = .10$). Thus, we found moderate support for our second hypothesis. Both our body image shame measures predicted concurrent depressive symptoms over and above conventional shame, and one of our two body image guilt measures did so over conventional guilt.

To test our third hypothesis, we ran 2 sets of regressions. In the first set, we regressed depression onto ABQ-CSB in the first step and added the ABQ-BI CSB in the second step. Similarly, we ran the second set of regressions using the BSB subscales of both measures. In the CSB model, ABQ-BI CSB predicted depression over and above

conventional ABQ CSB ($\beta = .30$, $R^2 = .28$), whereas nothing was significant in the BSB model (see Models 4 and 6 of Table 6). Thus, we found partial support for our third hypothesis. Body image CSB predicted concurrent depressive symptoms over and above conventional CSB, whereas body image BSB did not.

Goal 2

Our second goal was to look at the effects of age and sex on the constructs of conventional and bodily shame/guilt and BSB/CSB. More specifically, we (1) examined the possible effect of sex on the relation between body image guilt/shame or body image BSB/CSB and depression, (2) we hypothesized there would be a direct effect of sex on levels of body image guilt/shame and body image CSB/BSB, and (3) there would be a relation between age and both conventional and body image guilt/shame or BSB/CSB.

To test for the effect of sex on the relation between body image measures and depressive symptoms, we ran 6 regressions with depression as our dependent variable and Sex, our predictor, and the interaction between Sex and each predictor as the independent variables. An example regression is

$$DEP = \beta_0 + \beta_1 \text{Sex} + \beta_2 \text{BIGGS Shame} + \beta_3 \text{Sex} \times \text{BIGGS shame}$$

For the 6 regressions, the predictors were subscales from our 3 measures of body image guilt/shame and body image BSB/CSB. None of the interactions between sex and body image guilt/shame or body image BSB/CSB were significant in predicting concurrent depression (see Table 7).

To test our second hypothesis, we did T-Tests comparing males to females on the subscales of each of the three body image measures (TOSCA-A BI, BIGGS, ABQ-BI). We found evidence for a sex effect on only 3 subscales. There were significant sex

differences on the mean levels of BIGGS shame ($t_{(237)} = -1.97$), TOSCA-A BI shame ($t_{(105)} = -2.01$), and TOSCA-A BI guilt ($t_{(104)} = -2.18$) in which females scored higher on average than males. Thus, there is weak support for the main effect of gender on levels of body image guilt/shame and body image CSB/BSB.

To test the third hypothesis, we correlated age with each of our 10 subscales. Age did not correlate with any body image measure and correlated negatively with three of the subscales from the conventional measures: TOSCA Guilt ($r = -.22$), ABQ-CSB ($r = -.34$), and ABQ-BSB ($r = -.24$). The negative correlations indicate that older children had lower scores on one guilt, one CSB, and one BSB subscale. These results offer weak support for our third hypothesis.

Discussion

There were four main findings in this study. First, body image guilt/shame and body image BSB/CSB showed evidence of both convergent and discriminant validity. Second, body image shame and CSB predicted concurrent depression over and above conventional measures of shame and CSB. Third, no interactions of sex and body image guilt, shame, BSB, or CSB affected depression. Fourth, age and sex had weak effects on levels of body image guilt/shame and body image BSB/CSB.

Our first finding was that measures of body image guilt/shame and BSB/CSB converged with each other and diverged from their conventional counterparts. Our results provide evidence for body image specific guilt/shame and BSB/CSB being related to but unique from traditional guilt/shame and BSB/CSB constructs. This finding is significant because this provides evidence that our measures of body image guilt/shame and BSB and CSB are truly different from the conventional measures. Thus, these

constructs are not merely different names for conventional constructs, but they represent something qualitatively different from the conventional constructs. Our results point to a lack of knowledge in the current literature concerning the newer constructs of body image guilt/shame and BSB/CSB.

Our second finding was that the construct of bodily shame/CSB explained more variance in depression than the conventional measures of shame/CSB. We found weak support for body image guilt/BSB predicting depression over and above traditional guilt/BSB. This finding illustrates that more specific body image shame/CSB constructs do a better job of predicting concurrent depression than do the conventional measures. In fact, our findings confirmed and built upon Thompson's findings in 2003. He was the first to mention the new constructs of body image guilt and shame and that they were inherently different than conventional guilt and shame. He did this through the use of his measure, the BIGGS. By using the BIGGS in our study and creating another bodily shame/guilt and bodily CSB/BSB measure, we add to the growing body of evidence showing that these constructs play an important role in adolescent depression. This finding may change the manner in which adolescent depression is understood and treated. Knowing that body image shame/CSB are better predictors of depression than conventional measures of shame/CSB can inform clinicians that shame specific to body image could be a focus in the treatment of depression in adolescents. Thus, our results enrich what we know about adolescents and depression. Perhaps the reason body image guilt/BSB did not predict depression over the conventional measures of depression is because even the general forms of guilt/BSB are not particularly strong predictors of

depression. Since the concepts of guilt/BSB do not relate to depression, adding the construct of body image to them does not do a better job of predicting depression.

Our third finding was a null result: no support emerged for an interaction between sex and any of the body image measures of guilt/shame and BSB/CSB in relation to depression. This result suggests that the relation between these body image specific constructs and depression may not differ for males and females. Our null findings suggest that a girl experiencing body image guilt/BSB or shame/CSB may have the same chances of depression as a boy doing the same. The stereotype of girls being more likely to fall into depression due to their negative thinking about their bodies may be unjustified.

Our fourth finding was that there was weak support for main effects of age and sex on the levels of body image and conventional guilt/shame and BSB/CSB. Specifically we found some evidence that older children reported lower levels on some body image measures and females reported lower levels of the constructs on some conventional measures.

One might expect there to be some difference in the body image guilt-proneness, shame-proneness, and self-blaming behaviors due to the cognitive developments between the 4th grade and 9th grade. The literature states younger children may not feel as helpless as older children (Cole et al., 1996, pp. 383; Tangney, 1992; Tangney & Dearing, 2002) suggesting that younger children may be less prone to feelings of guilt, shame, BSB, or CSB. One might expect to see less body image shame/CSB or guilt/BSB in younger children. Our results suggest that the opposite may actually be true. Since older children scored lower on only three of the ten subscales, it is hard to say whether or not age truly

affects one's guilt-proneness, shame-proneness, or self-blaming behaviors. Thus, our results are not definitive, but they open the door to future research into the role cognitive development plays in these constructs.

While some of the literature states that girls are more affected by body image dissatisfaction, other literature states that males have been overlooked and have not been studied enough to make this conclusion (Annis et al., 2004; Cohane & Pope, 2001; Davison & McCabe, 2006; Rierdan & Koff, 1997). Due to this controversy concerning boys and girls' body dissatisfaction, it was interesting to see that there was a slight gender effect with relation to bodily guilt/shame and bodily BSB/CSB. The findings proved to be significant in the BIGGS-Shame, TOSCA-BI Shame, and BIGGS guilt; boys reported less body image shame and guilt than did girls. These findings go along with the literature that states that females may be more affected by their body image.

Several shortcomings of the current study suggest avenues for future research. First, two of the measures we used, the TOSCA-BI and ABQ-BI, were new measures that have not been used in previous studies. Although, this study provides evidence of validation with the established BIGGS measure, more studies are needed to confirm that they in fact measure the same construct. Second, developmental differences on bodily guilt/shame-proneness or bodily BSB/CSB may have been underestimated because our participants' ages were too close. Future studies could address the same question with greater age differences, perhaps using 4th and 12th graders. Third, this study examined cognitive differences in the constructs using cross-sectional data. A longitudinal study would be ideal in assessing whether there are changes in bodily guilt/shame-proneness and bodily self-blame within individuals over time. Although it seems that a person's

shame or guilt-proneness or self-blaming characteristics may or may not change as they grow older, a longitudinal study with a larger sample size would provide more conclusive evidence. Fourth, the majority of our participants were Caucasian and thus, the results of this study may not generalize to all children and adolescents. Future studies could include more minority children and adolescents to investigate the generalizability of our results to other races. Addressing novel measures, greater age differences, longitudinal study, larger sample size, and more minority participants could add to the growing literature, replicating and extending current findings about body image guilt, shame, CSB, and BSB.

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APPENDIX TABLES

Table A1
Means, Standard Deviation, and Cronbach's Alpha for all Scales

Scale	Mean (S.D.)	Cronbach's Alpha	Means (S.D)		
			Total Sample	Boys	Girls
BIGGS- Guilt	50.01 (11.50)	0.87	49.81 (11.85)	50.16 (11.28)	$t_{(237)} = -.23$
BIGGS- Shame	38.37 (13.57)	0.91	36.38 (12.83)	39.86 (13.95)	$t_{(237)} = -1.97^*$
ABQ-BI- BSB	47.26 (15.81)	0.93	47.50 (15.03)	47.08 (16.47)	$t_{(129)} = .15$
ABQ-BI- CSB	39.16 (14.45)	0.91	39.38 (13.41)	39.00 (15.26)	$t_{(130)} = .15$
ABQ- BSB	63.02 (13.41)	0.84	63.37 (14.31)	62.76 (12.79)	$t_{(129)} = .26$
ABQ- CSB	41.93 (13.37)	0.88	43.22 (13.19)	40.98 (13.50)	$t_{(130)} = .95$
TOSCA-BI- Guilt	32.67 (6.59)	0.80	31.07 (6.96)	33.85 (6.10)	$t_{(104)} = -2.18^*$
TOSCA-BI- Shame	23.25 (8.33)	0.86	21.41 (8.29)	24.64 (8.16)	$t_{(105)} = -2.01^*$
TOSCA- Guilt	56.42 (8.95)	0.84	54.33 (10.46)	58.01 (7.30)	$t_{(109)} = -2.18^*$
TOSCA- Shame	35.50 (8.08)	0.76	36.44 (8.54)	34.80 (7.72)	$t_{(108)} = 1.05$
CDI	9.65 (7.77)	0.89	9.69 (7.71)	9.62 (7.85)	$t_{(237)} = .07$

Table A2
ABQ-BI Exploratory Factor Analyses

Packet	CSB	BSB
CSB-BI 3	0.93	0.10
CSB-BI 2	0.80	-0.03
CSB-BI 1	0.78	0.06
CSB-BI 4	0.58	-0.13
CSB-BI 5	0.56	-0.11
BSB-BI 4	-0.13	-0.85
BSB-BI 1	0.05	-0.84
BSB-BI 3	0.10	-0.82
BSB-BI 2	0.14	-0.63

Note. ABQ-BI = Attributional Blame Questionnaire-Body Image measure; CSB= Characterological Self-Blame; BSB= Behavioral Self-Blame; Factor Correlation = .52.

Table A3
BIGSS Exploratory Factor Analyses

Packet	CSB	BSB
Shame 5	0.90	-0.09
Shame 4	0.85	-0.03
Shame 1	0.83	0.01
Shame 2	0.76	0.06
Shame 3	0.65	0.21
Guilt 1	-0.03	0.79
Guilt 4	0.10	0.77
Guilt 3	-0.08	0.75
Guilt 5	0.07	0.71
Guilt 2	0.05	0.70

Note. BIGGS = Body Image Guilt and Shame Scale; Factor Correlation = .61.

Table A4
TOSCA-BI Exploratory Factor Analyses

Item	Shame	Guilt
Shame Items		
TOSB07B	0.68	0.03
TOSB10A	0.67	-0.01
TOSB12A	0.66	0.09
TOSB03A	0.66	0.12
TOSB05B	0.61	-0.12
TOSB14A	0.60	0.32
TOSB13A	0.59	0.02
TOSB09A	0.58	0.15
TOSB02B	0.53	-0.12
TOSB15A	0.50	-0.07
Guilt Items		
TOSB09B	0.26	0.71
TOSB03B	0.10	0.69
TOSB04B	-0.13	0.53
TOSB14B	0.05	0.53
TOSB13B	0.29	0.48
TOSB02A	-0.01	0.47
TOSB07A	0.15	0.43
TOSB10B	0.32	0.42
TOSB05A	-0.09	0.39

Note. TOSCA-BI = Test of Self-Conscious Affect-Body Image Measure;
 Factor Correlation = .28

Body image self-blame 35

Table A5

Correlations between guilt, shame, body image guilt, body image shame, body image CSB, body image BSB, and depression scales

	1	2	3	4	5	6	7	8	9	10	11
1 BIG_SHM	1	.78 (**)	.60(**)	.46(**)	.41(**)	.58(**)	.40(**)	.44(**)	.07	.32(**)	.45(**)
2 TOSB_SHM	.78(**)	1	.(a)	.51(**)	.(a)	.47(**)	.44(**)	.(a)	.17	.(a)	.38(**)
3 ABBI_CHR	.60(**)	.(a)	1	.(a)	.60(**)	.43(**)	.(a)	.49(**)	.(a)	.41(**)	.48(**)
4 TOSA_SHM	.46(**)	.51(**)	.(a)	1	.(a)	.26(**)	.28(**)	.(a)	.28(**)	.(a)	.19(*)
5 AB_CHR	.41(**)	.(a)	.60(**)	.(a)	1	.20(*)	.(a)	.19(*)	.(a)	.52(**)	.48(**)
6 BIG_GLT	.58(**)	.47(**)	.43(**)	.26(**)	.20(*)	1	.66(**)	.60(**)	.26(**)	.35(**)	.19(**)
7 TOSB_GLT	.40(**)	.44(**)	.(a)	.28(**)	.(a)	.66(**)	1	.(a)	.53(**)	.(a)	.04
8 ABBI_BEH	.44(**)	.(a)	.49(**)	.(a)	.19(*)	.60(**)	.(a)	1	.(a)	.41(**)	.07
9 TOSA_GLT	.07	.17	.(a)	.28(**)	.(a)	.26(**)	.53(**)	.(a)	1	.(a)	-.16
10 AB_BEH	.32(**)	.(a)	.41(**)	.(a)	.52(**)	.35(**)	.(a)	.41(**)	.(a)	1	.08
11 CDTOT	.45(**)	.38(**)	.48(**)	.19(*)	.48(**)	.19(**)	.04	.07	-.16	.08	1

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

* Correlation is significant at the 0.05 level (2-tailed).

a Cannot be computed because at least one of the variables is constant.

Note: BIG_SHM: Body Image Guilt and Shame Scale (Shame); TOSB_SHM; Test of Self-Conscious Affect-Body Image Measure (Shame); ABBI_CHR: Attributional Blame Questionnaire- Body Image measure (CSB); TOSA_SHM: Test of Self-Conscious Affect measure (Shame); AB_CHR: Attributional Blame Questionnaire measure (CSB); BIG_GLT: Body Image Guilt and Shame Scale (Guilt); TOSB_GLT; Test of Self-Conscious Affect-Body Image Measure (Guilt); ABBI_BEH: Attributional Blame Questionnaire- Body Image measure (BSB); TOSA_GLT: Test of Self-Conscious Affect measure (Guilt); AB_BEH: Attributional Blame Questionnaire measure (BSB); CDTOT: Children's Depression Inventory measure

Table A6

Partial Beta Weights (Standardized) from the Regressions of Various Guilt, Shame, BSB, CSB, Body image guilt and shame, Body image CSB and BSB Subscales onto Measures of Attributional Dimensions and Depressive Symptoms

Predictor	B (unstandardized)	Std. Error	B (Standardized)	R ²
Model 1				
TOSA_SHM	-.02	.11	-.01	
TOSB_SHM	.38	.10	.39**	.14**
Model 2				
TOSA_SHM	.04	.11	.04	
BIG_SHM	.21	.06	.35**	.14**
Model 3				
AB_CHR	.16	.05	.30**	
ABBI_CHR	.15	.05	.30**	.28**
Model 4				
TOSA_GLT	-.21	.10	-.23*	
TOSB_GLT	.21	.14	.17	.04
Model 5				
TOSA_GLT	-.22	.09	-.24*	
BIG_GLT	.21	.07	.28**	.10**
Model 6				
AB_BEH	.03	.05	.06	
ABBI_BEH	0.02	.05	.04	.01

* $p < .05$ ** $p < .01$

Note: TOSA_SHM: Test of Self-Conscious Affect measure (Shame); TOSB_SHM; Test of Self-Conscious Affect-Body Image Measure (Shame); BIG_SHM: Body Image Guilt and Shame Scale (Shame); AB_CHR: Attributional Blame Questionnaire measure (CSB); ABBI_CHR: Attributional

Blame Questionnaire- Body Image measure (CSB); TOSA_GLT: Test of Self-Conscious Affect measure (Guilt); TOSB_GLT; Test of Self-Conscious Affect-Body Image Measure (Guilt); BIG_GLT: Body Image Guilt and Shame Scale (Guilt); AB_BEH: Attributional Blame Questionnaire measure (BSB); ABBI_BEH: Attributional Blame Questionnaire- Body Image measure (BSB)

Table A7

Regressions of depression onto the main effects and interactions of each guilt/shame/body image measure and sex.

Predictor	B	SE	β	R ²
Model 1				
Sex	-7.16	4.42	-.44	
TOSB_SHM	.21	.14	.21	
Sex X TOSB_SHM	.30	.18	.50	.17
Model 2				
Sex	2.01	8.34	.12	
TOSB_GLT	.07	.18	.05	
Sex X TOSB_GLT	-.04	.25	-.09	.004
Model 3				
Sex	-1.13	3.39	-0.8	
ABBI_CHR	.23	.07	.45**	
Sex X ABBI_CHR	.02	.08	.07	.23
Model 4				
Sex	-1.61	4.16	-.11	
ABBI_BEH	.02	.07	.04	
Sex X ABBI_BEH	.02	.08	.08	.01
Model 5				
Sex	-2.76	2.77	-.18	
BIG_SHM	.24	.05	.41**	
Sex X BIG_SHM	.05	.07	.13	.21

Model 6				
Sex	-.22	4.49	-0.1	
BIG_GLT	.13	.07	.19*	
Sex X BIG_GLT	.00	.09	.001	.04

Note: TOSB_SHM; Test of Self-Conscious Affect-Body Image Measure (Shame); TOSB_GLT; Test of Self-Conscious Affect-Body Image Measure (Guilt); ABBI_CHR: Attributional Blame Questionnaire-Body Image measure (CSB); ABBI_BEH: Attributional Blame Questionnaire- Body Image measure (BSB); BIG_SHM: Body Image Guilt and Shame Scale (Shame); BIG_GLT: Body Image Guilt and Shame Scale (Guilt)