WEIGHT TEASING AND BODY IMAGE IN PREADOLESCENT GIRLS:
SOCIAL SUPPORT AS A MODERATOR VARIABLE
HUMBOLDT STATE UNIVERSITY

By
Audra Gosvener

A Thesis
Presented to
The Faculty of School Psychology

July, 2010
WEIGHT TEASING AND BODY IMAGE IN PREADOLESCENT GIRLS:
SOCIAL SUPPORT AS A MODERATOR VARIABLE
HUMBOLDT STATE UNIVERSITY

By
Audra Gosvener

Approved by the Master’s Thesis Committee:

Dr. William Reynolds, Major Professor               Date

Dr. Emily Sommerman, Committee Member               Date

Chris Byrne, M.A., Committee Member                 Date

Dr. Emily Sommerman, Graduate Coordinator           Date

Dr. Jená Burges, Vice Provost                        Date
ABSTRACT

WEIGHT TEASING AND BODY IMAGE IN PREAMDOLESCENT GIRLS: SOCIAL SUPPORT AS A MODERATOR VARIABLE

Audra Gosvener

The purpose of the current study was to examine weight teasing and social support variables on body image as an outcome variable. Participants consisted of 251 female preadolescents between 4th and 7th grade, ages 9 to 14 years. Participants completed self-report measures of body image (The Body Esteem Scale), weight teasing (McKnight Risk Factor Survey-IV), and social support (Multidimensional Scale of Perceived Social Support). The study scales were tested for reliability, which ranged from $\alpha=.89$ to $\alpha=.92$. Major hypotheses examined: (1) the correlational relationship between weight teasing and body image, and (2) social support as a moderator on the relationship between weight teasing and body image. The moderation hypothesis was examined using recommendations from Baron and Kenny (1986) and Frazier, Barron, and Tix (2004). The correlation between weight teasing and body image was moderate ($r=-.54$), and a stronger relationship than hypothesized. Hierarchical regression analysis was used to examine Hypothesis Two. Social support showed a partial moderation effect on the relationship between weight teasing and body image in preadolescent females. Hierarchical regression analysis yielded a significant interaction between the predictor variables on the outcome variable ($\beta=-.52, p=.002$). Social support showed a relationship with body image ($\beta=.70, p<.001$) in hierarchical regression analysis, however, the
regression did not yield a significant main effect for weight teasing ($\beta=.09, p=.60$).

Findings suggest that those with high levels of social support have healthier levels of body image.
ACKNOWLEDGMENTS

I would like to extend my sincere and deepest gratitude to my advisor and mentor, Dr. William Reynolds. His encouragement, guidance, and expertise have been incredible gifts to me as I diligently worked toward my research goals. His patience, time, and dedication to high standards in research have provided invaluable knowledge and experience along the way. The magnitude of his mentorship cannot be measured. I would like to thank my committee members, Emily Sommerman and Chris Byrne, who have graciously supported my efforts as well. Special thanks to my mother and father who have always believed in my abilities and supported my dreams. It is because of them that I believe in myself. Thank you to my husband, Travis, who has been patient and supportive of my dreams. His humorous character brought many smiles to my face as I worked through challenging and often tiresome days and nights for the length of the research process. Finally, thank you to my friend, Brittaini, whose goals have reflected my own, and whose friendship has offered support and camaraderie as we both aimed to reach our research potential.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>CHAPTER I: INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>CHAPTER II: LITERATURE REVIEW</td>
<td>5</td>
</tr>
<tr>
<td>Pubertal Development and Gender Difference</td>
<td>5</td>
</tr>
<tr>
<td>Body Image in Children</td>
<td>7</td>
</tr>
<tr>
<td>Body Image and Social-Emotional Constructs</td>
<td>10</td>
</tr>
<tr>
<td>Body Image and Eating Disorders</td>
<td>11</td>
</tr>
<tr>
<td>Weight Related Teasing</td>
<td>12</td>
</tr>
<tr>
<td>Social Support</td>
<td>14</td>
</tr>
<tr>
<td>Parental and Familial Social Support</td>
<td>14</td>
</tr>
<tr>
<td>Peer Social Support</td>
<td>18</td>
</tr>
<tr>
<td>Summary</td>
<td>19</td>
</tr>
<tr>
<td>CHAPTER III: STATEMENT OF THE PROBLEM</td>
<td>21</td>
</tr>
<tr>
<td>Major Research Hypotheses and Rationale</td>
<td>23</td>
</tr>
<tr>
<td>Hypothesis One</td>
<td>23</td>
</tr>
<tr>
<td>Hypothesis One Rationale</td>
<td>24</td>
</tr>
<tr>
<td>Hypothesis Two</td>
<td>24</td>
</tr>
<tr>
<td>Hypothesis Two Rationale</td>
<td>24</td>
</tr>
<tr>
<td>CHAPTER IV: METHODOLOGY</td>
<td>27</td>
</tr>
</tbody>
</table>

vi
TABLE OF CONTENTS (CONTINUED)

The Body Esteem Scale .................................................................................. 27
McKnight Risk Factor Survey-IV – Weight Teasing Scale......................... 29
Multidimensional Scale of Perceived Social Support................................. 29

Procedure ........................................................................................................ 30

Data Analysis ................................................................................................... 31
Primary Analysis ............................................................................................. 31
Preliminary Analysis ....................................................................................... 34

Benefits and Potential Risks .......................................................................... 34
Benefits ........................................................................................................... 34
Potential Risks ................................................................................................. 34
Risk Management ........................................................................................... 35

CHAPTER V: RESULTS ................................................................................... 36
Preliminary Analysis ....................................................................................... 36
Primary Analysis ............................................................................................. 38
Hypothesis One ............................................................................................... 38
Hypothesis Two ............................................................................................... 38

CHAPTER VI: DISCUSSION ........................................................................... 42
Introduction ..................................................................................................... 42
Preliminary Study Results ............................................................................. 44
Primary Study Results .................................................................................. 45
Hypothesis One ............................................................................................... 45
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis Two</td>
<td>47</td>
</tr>
<tr>
<td>Summary</td>
<td>48</td>
</tr>
<tr>
<td>Limitations</td>
<td>49</td>
</tr>
<tr>
<td>Recommendations for Future Research</td>
<td>49</td>
</tr>
<tr>
<td>Conclusion</td>
<td>50</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>51</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>63</td>
</tr>
<tr>
<td>APPENDIX B</td>
<td>65</td>
</tr>
<tr>
<td>APPENDIX C</td>
<td>67</td>
</tr>
<tr>
<td>APPENDIX D</td>
<td>69</td>
</tr>
<tr>
<td>APPENDIX E</td>
<td>71</td>
</tr>
<tr>
<td>APPENDIX F</td>
<td>73</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weight Teasing v. Body Image</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Sample Demographics</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>Means and Standard Deviations of Measures</td>
<td>37</td>
</tr>
<tr>
<td>4</td>
<td>Multiple Regression Analysis for Moderation: Weight Teasing, Social Support, and the Interaction between Weight Teasing and Social Support Predicting Body Esteem</td>
<td>40</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>Hypothesized Relationship Between Weight Teasing and Body Image as Moderated by Social Support</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>Moderator Model for Analysis (adapted from Baron &amp; Kenny, 1986)</td>
<td>33</td>
</tr>
<tr>
<td>3</td>
<td>Social Support by Weight Teasing on Body Esteem</td>
<td>41</td>
</tr>
</tbody>
</table>
CHAPTER I
INTRODUCTION

Being thin is a strong value within our society, particularly among females. Among males, it is the muscular physique that is appealing. These ideals are often what society views as attractive, what persons of this society “wish” they could be or strive for (Jung & Peterson, 2007; McCabe, Ricciardelli, & Finemore, 2002). The “attractive” message from society is heard by adults, adolescents, and even children. The message is delivered via media, peers, and parents, and family members (Robert-McComb, 2008). Through these societal messages, boys and girls have come to understand that “fat is bad” and “thin is good” well before adolescence (Flanner-Schroeder & Chrisler, 1996). Overweight children from a young age begin to internalize this message, wish to be thinner, and have poorer body image than those of average weight (Smolak, 2002). Our society is imposing on children and adolescents that they do not measure up to standard unless they fit the mold.

Negative body image can be conceptualized as occurring along a spectrum (Robert-McComb, 2008). Body dissatisfaction, on one end of the body image spectrum, is a lesser degree of negative body image, while body image disturbance is an acute degree of negative body image. The spectrum ranges from a normal desire to look attractive to a pathological concern with thinness. Body image is a concept inclusive of many related terms used widely in research such as: body dissatisfaction, negative body
image, body dysphoria, body image distortion, body esteem, and body image disturbance. Body image can be defined as one’s internal representation of their own outer appearance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), referring to how one perceives their weight, shape, and appearance. It relates to the comparison of the self to others, and level of importance one places on each of these factors.

How one feels about their appearance influences how one behaves. Research supports that body image plays a role in the development and maintenance of eating dysfunction and eating disorders (McKnight Investigators, 2003). In adolescents, negative body image has been associated with eating disorder symptoms (Croll, Neumark-Sztainer, Story, & Ireland, 2002). Females with more eating disorder symptoms have poorer body image, in conjunction with other psychological problems such as depression and feelings of ineffectiveness.

The U.S. prevalence of eating disorders such as Anorexia Nervosa and Bulimia Nervosa is 10 million females and 1 million males (National Eating Disorders Association, 2005). According to Hoek and van Hoeken (2003), 40% of new cases of Anorexia are 15 to 19 year olds. Eating disorders are consistently found to occur more often in females than males. Clinical samples show that only 5 to 10 percent of eating disorder victims are males (Garner & Gerborg, 2004), which may explain why research surrounding body image and eating dysfunction is predominately focused on females. Eating disorders such as Anorexia Nervosa and Bulimia Nervosa are maintained by disturbed body image. Anorexia is characterized by refusal to maintain minimally normal weight for age and height (American Psychiatric Association [APA], 1994). Often,
deprivation of food and calories or excessive exercise is the mode by which the client maintains significantly low body weight. The diagnostic criteria for Anorexia includes, “intense fear of gaining weight or becoming fat, even though underweight,” and, “disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the current low body weight.” Bulimia is characterized by recurrent episodes of binge eating and subsequent compensatory behavior by modes such as the use of laxatives, vomiting, and excessive exercising to prevent weight gain. Like Anorexia, diagnostic criteria for Bulimia include, “self-evaluation (that) is unduly influenced by body and shape” (APA, 1994). These eating disorders are dangerous and life threatening, especially due to the health concerns that accompany such behavior. Heart complications and failure, hair loss, osteoporosis, and muscle loss are just a few complications which arise with Anorexia (National Eating Disorders Association, 2005). Bulimia comes with side-effects such as irregular heartbeats, heart failure, ulcers, gastric rupture, and esophageal inflammation and rupture. Both of these disorders can ultimately result in death. Of any psychiatric disorder, Anorexia has the highest premature death rate. Most deaths are due to physiological complications which are side-effects of the disorder (National Eating Disorders Association, 2005).

Binge eating is a significant risk factor associated with obesity onset (Stice, Presnell, & Spangler, 2002; Stice, Cameron, Killen, Hayward, & Taylor, 1999). Dieting, pressure to be thin, negative body image, low self-esteem, and low social support are risk factors associated with binge eating onset in adolescents. One theory suggests that dieting
increases the probability of overeating as a result of the physiological effects of low calorie consumption. Poor body image, appearance overvaluation, pressure to be thin, and modeling of eating disturbances increase the risk for binge eating by promoting dieting. Thus, binge eating may be rooted in pressures to conform to the current thin ideal (Stice et al., 2002). In North America childhood and adolescent obesity is a growing concern. Childhood obesity in children ages 6 to 11 has increased from 6% to 17% from 1980 to 2006. In the same time frame, obesity has increased from 6.5% to 17.6% in preadolescents and adolescents aged 12 to 19 (Centers for Disease Control and Prevention, n.d.). Obese children are more likely to become obese as adults, and are at risk for significant health issues such as cardiovascular disease and type 2 diabetes.

Many factors have been associated with body image in research. Western culture’s current societal ideals are image-based for men and women, and are very hard to attain. Aside from the media, environmental factors close to home influence body image, particularly the family and peers. Regardless of age, family and peers have important roles in shaping who we become within our society, including our thoughts and appearance. Weight teasing from peers and family have been associated with body image (Eisenberg, Neumark-Sztainer, Haines, & Wall, 2006; Quinlan, Hoy, & Costanzo, 2009) and are thought to negatively impact how young females view themselves. The current study explores these concepts further.
CHAPTER II
LITERATURE REVIEW

The Literature Review chapter begins by outlining current literature on gender and pubertal development, followed by body image in children and adolescents, with attention to social emotional constructs and eating disorders. A discussion of weight teasing literature and its relationship with body image is then discussed, followed by a discussion of social support literature which touches on parental and familial social support, as well as peer social support.

Pubertal Development and Gender Difference

Puberty is a time accompanied by dramatic physiological and physical change. A shifting of body image is one of the many changes to occur at puberty (Stice, 2003). Physical changes in boys include the broadening of shoulders, facial hair growth, and deepening of voice. Girls experience the development of breasts, the broadening of hips, and menarche. These changes result in an increase in adipose tissue for girls and in muscle mass for boys. Increased growth rate, muscle development, genitalia growth, and pubic hair growth are experienced by both genders during pubertal development (Papalia, Wendkos-Olds, & Duskin-Feldman, 2007). The average girl begins to show pubertal development between 9 and 11 years of age, while the average boy begins to show pubertal development between the age of 12 and 15 years. Studies have shown boys and girls recall their earliest sexual attraction as having taken place near age ten.
Increased adipose tissue in girls during puberty creates a discrepancy from the sociocultural female thin-ideal (Papalia et al., 2007; Stice, 2003). Girls become increasingly unhappy about their appearance during pubertal development as it deviates from the ideal, while boys are found to become more satisfied with their bodies due to their increased muscular development and progress toward the male ideal (Rosenblum & Lewis, 1999; Swarr & Richards, 1996). During the time of pubertal development weight and eating concerns take a rise. Swarr and Richards (1996) found pubertal development to have a significant relationship with weight and eating concerns concurrently among 5th to 9th grade girls. Grade level also showed a relationship, as grade increased so did weight and eating concerns. Higher weight and eating concerns in girls at time 1 predicted higher eating dysfunction 2 years later. In a longitudinal study, Rosenblum and Lewis (1999) observed diminished body image over time in girls from ages 13 to 15, but no significant changes in body image between 15 and 18. For boys, body image improved from ages 13 to 15 as the boys approached pubertal development. Whether an adolescent or child is a male or female also determines one’s likelihood to have body image issues. In Rosenblum and Lewis (1999) gender was a significant predictor of body image at age 18; girls were found to have significantly poorer body image than boys. In preadolescence and adolescence, girls have been found to have poorer ratings of body image than boys (Mendelson & White, 1996). With age, body image decreased and was significantly poorer in older adolescents than younger adolescents. With increasing weight, female adolescents had poorer body image, as identified by appearance and weight evaluations.
Research has shown that boys tend to have poorer body image during the prepubescent years (Saling, Ricciardelli, & McCabe, 2005), while teenage adolescent males report healthier body image (Rosenblum & Lewis, 1999). As males fall more in line with the body ideal, they become happier with their image. Saling et al. (2005) found boys’ muscle preoccupation to increase with grade level in 8-10 year old boys. At time of puberty, boys have more positive body image and become more in line with the muscular ideal due to increased muscle mass by pubertal changes. But Saling et al. (2005) showed that in prepubescent boys, muscle preoccupation increases with age prior to pubertal development. Such findings are an indication of fixation on the ideal prior to becoming more in line with the societal standard. Similarly to girls, as one’s body deviates from the societal ideal they become subject to negative body image. In this study, boys’ muscle preoccupation was significantly greater than girls’ muscle preoccupation, consistent with ideal body image preferences for gender.

Body Image in Children

Body image internalization and concerns in children begin developing during the elementary years. Flanner-Schroeder and Chrisler (1996) posit that “children growing up in this society will be unlikely to escape the pressures that arise from the cultural standards of beauty and thinness. Instead, they are likely to learn early in life the social benefits of thinness and the negative stereotypes associated with ‘excessive’ weight.”

Children as young as first grade express weight concerns and engage in dieting and eating disordered behaviors (Flanner-Schroeder & Chrisler, 1996). The body image problems among these children worsen with age. Flanner-Schroeder and Chrisler (1996)
report a desire to be thinner by first, third, and fifth graders at rates of 36%, 35%, and 68%, respectively. Twenty-one percent of the first grade students reported current dieting. Four percent of first graders and 16% of fifth graders reported vomiting on purpose after eating.

Body Image is shaped by environmental factors inclusive of one’s family, peers, media, and community. Preadolescents who have had increased exposure to media messages from sources such as magazines and television exhibit poorer body image (Jung & Peterson, 2007). Based on the influence portrayed by the media, youth are subjecting appearance-judgment on themselves as well as their peers. In an 8 to 11 year old sample, ideal body image for gender was reinforced by the opposite gender’s preferences for body shapes (Jung & Peterson, 2007). Boys chose an ideal figure for girls which was commensurate with girls’ ideal figures for themselves, and girls chose an ideal figure for boys which was the predominate ideal figure reported by the boys for themselves. These relationships suggest a link between opposite-sex peers and the development of body image issues, or the universal reinforcement of societal ideals by environmental influences on boys and girls. In a Los Angeles study of 239 3rd grade children ages 8 to 10, Shapiro, Newcomb, and Loeb (1997) found 41% of girls dieting and exercising to lose weight. Thirty-one percent of girls and 30% of boys reported constant fear of becoming fat. Seventy-eight percent of boys, and 75% of girls felt “It is bad to be fat.” Shapiro et al. (1997) evaluated perceived origins of positive attitudes toward thinness and negative attitudes toward obesity. The subgroup “other relations” (siblings, cousins, aunts, uncles, grandparents), the nuclear family (mom, dad, brother, sister), and the media
(newspaper, television, radio, magazines) were the three largest influences in boy’s and girl’s thinness and obesity attitudes, respectively.

Negative body image is shown consistently in research to be highly prevalent among children (Davison, Markey, & Birch, 2003; Jung & Peterson, 2007; McCabe & Ricciardelli, 2001; Wood, Becker, & Thompson, 1996). Fifty-five percent of girls and 35% of boys ages 8 to 10 report negative body image, with girls reporting significantly poorer body image than boys (Wood et al., 1996). Davison and McCabe (2006) observed significant gender differences for body image in 12 to 15 year olds as well. Girls’ body image was significantly poorer than boys, and girls’ self-attractiveness ratings were poorer than boys’ self-ratings. In girls, the body preference is a thin physique, while boys’ preference is a more muscular physique (Humphreys & Paxton, 2004; McCabe, Ricciardelli, & Finemore, 2002; Sands & Wardle, 2003; McCabe, Ricciardelli, & Salmon, 2006). McCabe et al. (2002) observed these physique preferences among 1189 males and females in grades seven and nine, and in 2006, McCabe et al. observed such gender preferences among 386 boys and girls ages 8 to 12.

Body Mass Index elevations have been found to increase the likelihood for boys and girls to utilize strategies to change their body (Davison et al., 2003; McCabe & Ricciardelli, 2001; McCabe et al., 2006; Tyler, Johnston, Dalton, & Foreyt, 2009). Boys with a larger BMI have less satisfaction with muscle tone, and are more likely to change their eating strategies to decrease their size (McCabe & Ricciardelli, 2001). In 97 3rd to 5th grade African American females, increased BMI was significantly related to poorer body image (Tyler et al., 2009). Among 182 5 to 9 year olds, negative body image and
weight concerns increased over time, and girls whose negative body image and weight concerns increased over time also had related increases in their BMI (Davison et al., 2003). With age, negative body image is established as perpetuating and growing in severity (Cash, 1996; Cash & Fleming, 2002).

**Body Image and Social-Emotional Constructs**

Research documents significant relationships between body image and social-emotional states such as depression, anxiety, and self-esteem. Bluth (2007) found 4th and 8th graders to be happier when they had more positive body image. Those who were less satisfied with their bodies showed more signs of depression. In 173 11 year olds, Sinton and Birch (2006) found that girls who placed high importance on weight and shape were more depressed than girls who did not hold the same value in appearance ($r=0.40$).

Davison and McCabe (2006), on the other hand, did not find a significant relationship between body image and depression in 418 8th and 9th grade students.

In Davison and McCabe (2006), self-esteem significantly predicted poor body image in adolescents. McCabe et al. (2006) noticed a similar relationship in 368 8 to 12 year olds; poor self-esteem predicted poor body image. High negative affect predicted girls’ poor body image as well. In female adolescents, Croll et al. (2002) observed high self-esteem, high levels of emotional well-being, high family connectedness, and school achievement as significant protective factors to reduce disordered eating risk in high school students. Females who reported disordered eating (56% of 9th grade females) reported significantly lower self-esteem, emotional well-being, family connectedness, and school connectedness.
**Body Image and Eating Disorders**

In a longitudinal study of 1,103 girls in Arizona and California, McKnight Investigators (2003) found that higher scores on factors measuring weight, shape, and eating concerns significantly predicted the onset of Bulimia Nervosa and binge-eating disorders in middle school and high school. Eight percent of girls who scored in the highest quartile of these factors developed an eating disorder over three years. In the lower three quartiles, only 1.2% of girls developed eating disorders. Of the total population of girls in California and Arizona, 2.9% developed eating disorders. In Arizona, Hispanic girls were more likely to report onset of eating disorders than any other ethnicity.

Stice et al. (2002) found BMI (r=.18), dieting (r=.25), body satisfaction (r=.15), appearance over-evaluation (r=.22), and pressure to be thin (r=.14), to predict onset of binge-eating disorder over time in 231 high school girls. Socio-emotional factors such as low self-esteem (r=-.22), emotional eating (r=.16), and depression (r=.19) also predicted binge-eating onset over time. Stice et al. (2002) suggest that higher adiposity (BMI) logically leads to dieting, and appearance over-evaluation, pressure to be thin, and body dissatisfaction lead an individual to diet. Dieting puts the person at a higher risk of binge-eating to counteract the caloric deprivation. Similarly, Neumark-Sztainer et al. (2007) found 10% of overweight girls to report both binge-eating and extreme weight-control behaviors in their longitudinal study.
Weight Related Teasing

Repetitive teasing increases self-focus and self-consciousness in youth (Bollmer, Harris, Milch, & Georgeson, 2003), and sets the foundation and momentum for negative body image. Self-focus and self-consciousness are concepts surrounding appearance schemas, how the youth portray their body in comparison to social pressures and ideals. Teasing shows a clear contribution to the development of body image and predicts negative outcomes in adolescents as well as preadolescents (Bollmer, et al., 2003; Vander Wal & Thelen, 2000; Keery, Boutelle, van den Berg, & Thompson, 2005).

Peer and parental teasing have been shown to increase weight concerns and eating problems in preadolescents and adolescents (Neumark-Sztainer et al., 2007; Vander Wal & Thelen, 2000). However, in a study of women with eating disorders (n=92, M=28.5 years), the women were surveyed about their teasing and bullying experiences in childhood, and childhood weight and appearance teasing by peers was found to significantly predict body dissatisfaction in the women (t=2.14), though family teasing did not (Sweetingham & Waller, 2008).

As young as fourth grade, weight related teasing is found to have a significant relationship with poor body image (Haines, Neumark-Sztainer, & Thiel, 2007; Thompson, Coover, Richards, Johnson, & Cattarin, 1995). Levels of children’s body image does not go unnoticed by adults, as evidenced by school staff reports of students comparing themselves to the media, students wanting to conform to the ideal image, and students feeling badly about their bodies (Haines et al., 2007). Among 210 females, Thompson et al. (1995) reported a moderate effect size of weight related teasing and
body image in 10 to 15 year olds ($r = -0.41$). Among 96 male and female 12 to 18 year olds, a low-moderate relationship between weight related teasing and body image was observed ($r = -0.33$) (Quinlan et al., 2009). Over time, Eisenberg et al. (2006) found time 1 weight teasing to predict poorer body image five years later in 12 to 18 year old males and females. Keery et al. (2005) also reported a low-moderate effect size of the weight teasing and body image relationship in 372 6th to 8th grade females ($r = 0.31$). In an adolescent study, weight teasing by peers was identified as a risk factor for binge-eating and extreme weight-control in girls. In boys, weight-teasing by peers increased risk for binge-eating as well (Neumark-Sztainer et al., 2007). These findings exemplify the negative impact of peer ridicule.

Though relationships between body image and weight teasing are observed in research concurrently and over time, Paxton, Eisenberg, and Neumark-Sztainer’s (2006) five-year longitudinal study only showed a significant link between the variables in early adolescent boys ($\beta = 1.48$). The study, consisting of 806 early adolescents and 1710 middle adolescents, did not show a longitudinal link between weight teasing and body image among middle adolescents or early adolescent girls. Likewise, Stice and Whitenton (2002) did not observe a significant longitudinal relationship over one year between weight teasing and body image among 496 11 to 15 year old girls.

Among 1207 12 to 14 year old females, Donavan, Spence, and Sheffield (2006) observed a significant low relationship between weight-related teasing and body image. Girls with high upset due to weight teasing had poorer body image ($r = 0.21$), higher preoccupation with their bodies, and engaged in more weight restricting behaviors. Body
image was linked with weight restricting behavior concurrently and over time. In a twin study of 10 to 15 year old females, weight-related teasing was significantly related to binge eating ($r = .30$) and negative affect ($r = .37$) (Suisman, Slane, Burt, & Klump, 2008). Eddy et al. (2007) studied overweight 8 to 18 year old males and females, and found appearance related teasing experience to have a low but significant relationship with eating disorder pathology ($r = .22$).

**Social Support**

**Parental and Familial Social Support**

Perceived social support is considered the most consistent and strongest predictor of personal adjustment, contributing to personality and social development (Pierce, Sarason, Sarason, Joseph, & Henderson, 1996). Social support has long term as well as short term implications. Supportive parent relationships foster coping skills which allow the child to meet challenges in stressful situations, reducing distress from the stressful situation by increasing coping resources, and ultimately reducing the threat of a stressful situation (Pierce et al., 1996). Parental support helps the child develop positive support schemata, which provides a template and influences the supportive relationships the child develops in adolescence and adulthood. In preadolescence and early adolescence, the greatest sources of support are parents, particularly mothers. For example, in a study of 199 5th and 6th grade students, parents, siblings, grandparents, and friends were rated on relationship qualities. Mothers and fathers were the most prominent providers of affection, enhancement of worth, and instrumental aid (Furman & Buhrmester, 1985). The relationship of most satisfaction and importance as rated by the children was the
parent relationship. Friends were reported as the greatest source of conflict. While parents actively provided emotional and tangible support, friends played a social companion role.

Relationships between peers and the family have been shown to be related to internalization of the thin ideal, eating dysfunction, weight concerns, and body image. Family and friend connectedness is found to have a protective influence on eating dysfunction and weight concerns, with adolescents most often showing the protective benefit from these relationships (Croll et al., 2002; Neumark-Sztainer et al., 2007). A study of 231 9th and 10th grade girls over ten months showed that binge eating predicted obesity (Stice et al., 2002). Further, they examined social support as a variable, and found that low peer support predicted binge eating in the adolescent females. However, low parental support did not have the same strength of relationship and did not predict binge eating. In adolescents, Stice et al. (2002) posit that perhaps feeling valued in one’s social environment buffers the drive to conform to a thin ideal in an effort to gain acceptance. In response to the weak relationship between parental support and binge eating, the authors theorized that parents were perhaps more likely to provide unconditional support to their children than peers. Thus, high parent support may be protective to eating dysfunction.

The McKnight Investigators (2003), in their three year longitudinal study of girls in grades 6 to 9, did not observe social support as a predictive factor of eating disorder onset. Though social support was not observed as a predictive factor, social pressure to be thin was a significant predictive factor of eating disorder onset for all girls in the sample. Ata, Bryant Ludden, and Lally’s (2007) findings among 177 13 to 19 year olds were that females within the high risk eating attitudes and behaviors group reported less parental
support and poorer body image, as compared to females in the low risk eating attitudes and behaviors group who reported higher levels of social support and healthier body image. In this sample of adolescents, however, peer support did not show significant relations with eating attitudes or behaviors ($\beta=.10$). In Ata et al. (2007), the most salient factor to predict negative body image, eating attitudes, and eating behaviors was the family pressure to lose weight, consistent with findings by Sinton and Birch (2006) and Ricciardelli and McCabe (2001).

Family cohesion is found to be a significant factor related to eating disorders. In 11 year-olds from a non-clinical sample, girls who reported high levels of restrained eating reported levels of family cohesion significantly lower than girls who reported low levels of restrained eating (Hill & Franklin, 1998). In adolescents with binge-eating disorder, meta-analysis showed that binge-eating adolescents had lower levels of family cohesion, as opposed to normal eaters and more healthy levels of family cohesion (Shisslak, Crago, & Estes, 1995). As shown in Shisslak et al. (2005), the influence of the family can impose increased risk for eating dysfunction. In Social Learning Theory, parents are viewed as social agents who influence body image by modeling, feedback, and instruction (Kearney-Cook, 2002). The family environment can foster emotional and cognitive vulnerabilities such as low self-esteem, poor self-image, and the promotion of the importance of the thin-ideal and dieting (Garner & Gerborg, 2004). Dysfunctional family patterns such as enmeshment, over-protection, rigidity, and poor conflict resolution have been linked to eating dysfunction. These risk factors highlight the familial influence which is imposed on the vulnerable child.
In 173 preadolescent girls, Sinton and Birch (2006) found girls who perceived more weight influence from their parents to have significantly higher appearance focus. Girls with higher appearance focus also had poorer body image and higher depression levels. In Ricciardelli and McCabe’s study (2001), perceived pressure from parents to lose weight predicted poorer body image ($\beta=.26$ girls, $\beta=.13$ boys) and weight control behaviors ($\beta=.35$ girls, $\beta=.23$ boys) among 11 to 15 year old boys and girls. Pressure from the mother was the greatest predictor of body image and body change strategies in both genders, once again highlighting the mother’s pivotal role. According to the authors of the study, mothers have a primary social influence in transferring messages to adolescents regarding weight loss practices and appearance.

In a longitudinal study, 5th through 9th grade girls who felt close to their mothers and fathers reported fewer eating and weight concerns ($5^{th}/6^{th}$ $\beta=.40$, $7^{th}-9^{th}$ $\beta=.48$) (Swarr & Richards, 1996). For girls in all grades, those who spent time with their fathers reported healthier eating scores, especially girls who reported perceived early pubertal development ($5^{th}/6^{th}$ $\beta=.40$, $7^{th}-9^{th}$ $\beta=.46$). However, in a longitudinal study of 326 preadolescents ages 8 to 10, parent relations were not significant predictors of girls’ eating behavior (Saling et al., 2005). Likewise, 5th and 6th grade girls, typically 10 to 12 years of age, did not show parent relation trends with eating and weight concerns in Swarr and Richards (1996). In the teenage adolescent population, girls showed higher correlations with parent relations and pressure to be thin than the preadolescents in these studies. Research has focused primarily on females, but adolescent population studies on both males and females show that living in two-parent households and having high
family connectedness is protective against eating dysfunction, especially in adolescents (Croll et al., 2002; Neumark-Sztainer et al., 2007). In young adult females, family dysfunction was significantly linked with bulimia symptoms and eating dysfunction ($M=18.83$ years) (Kluck, 2008). As family dysfunction increased, eating dysfunction increased among these college women.

Family relationships, as indicated by time spent with parents, closeness with parents, and family connectedness, have positive effects on eating and weight concerns for all age groups. As the preadolescent progresses into adolescence and young adulthood, especially in females, the eating and weight concerns become progressively worse. Youth who suffer from lack of parental relationships and closeness are more likely to have dysfunctional eating and weight concerns. The effects of the parental relationships on eating and weight concerns begin to surface from childhood. And with age these concerns have been shown in females to develop into full-blown or partial eating disorders (Killen et al., 1994; McKnight Investigators, 2003).

**Peer Social Support**

In adolescence autonomy is an important factor of healthy development. Often adolescents’ autonomy needs outweigh parent dependency needs, and shift from reliance on the parents to greater self-reliance and reliance on peer relationships (Barrera & Li, 1996). In middle childhood children begin to adapt to life outside of the family in areas of school and peers (DeFries, Plomin, & Fulker, 1994). At this time in development, peer relationships and acceptance are conducive to socialization: providing support, companionship, self-validation, and affection (Rose-Krasner, 1997). In this stage,
children learn from their peer group which behaviors and emotions are acceptable to express, as well as appropriate verbal communication and nonverbal communication.

Peers have been shown to have significant influence in the development of body image factors in youth. Peer groups generally consist of same age and sex peers who live near one another and attend school together (Papalia et al., 2007). Sinton and Birch (2006) studied sociocultural variables of girls’ body image and findings showed that as girls experienced more peer appearance-related interactions such as conversations about weight and shape and comparison of body sizes, their body dissatisfaction and appearance focus increased. In girls ages 9 to 12, Sands and Wardle (2003) found a significant relationship between peer weight-related attitudes and body image ($r=.27$). The relationship between peer influence and body image was also found to be mediated by internalization of the thin ideal. Over 5 years among 2516 adolescents, friend connectedness was a protective factor for eating dysfunction in boys and girls (Neumark-Sztainer et al., 2007). The authors suggest that peer influence effects body dissatisfaction by promoting the awareness of the sociocultural thin-ideal, but more significantly by influencing the internalization of the thin-ideal.

**Summary**

Body Image and weight concerns among preadolescents are shown in the literature to be affected by a number of factors. Parents, the family, peers, and media play an influential role in the development of body image in youth. Weight-teasing is related to poor outcomes of body image and mental health, and a number of social-emotional variables are shown in research as related to body image, including depression, self-
esteem, and eating disorders. Literature shows that with age, especially in girls, the problems worsen. As girls approach puberty their development causes a discrepancy from the thin-ideal. Some literature shows that with age, as boys approach pubertal development, they develop improved body esteem due to their increased muscular growth and approach toward the male ideal. Social support has shown a protective relationship on body image, including peer, family, and parental relationships. Adolescent literature is more prevalent than the preadolescent research on body image, but plays a large role in understanding the implications of body image development over time.
CHAPTER III
STATEMENT OF THE PROBLEM

Body image is a factor which affects how one views him or herself, particularly related to body size and shape (Thompson et al., 1999). Research shows poor body image to have relationships with negative affect, self-esteem, depression, and feelings of ineffectiveness (Croll et al., 2002; Davison & McCabe, 2006). Among the negatively impacted relationships that coincide with poor body image, eating disorders have been found to have a longitudinal relationship with body image (Stice et al., 2002). In the McKnight Investigator (2003) study, relationships between weight, shape, and eating concerns were found with eating disorders, and Stice et al. (2002) found pressure to be thin, body image, dieting, and appearance over-evaluation to predict eating disorders over time. Children as young as first grade exhibit negative body image and eating dysfunction such as dieting and purposeful vomiting after meals (Flanner-Schroeder & Chrisler, 1996). Over time, body image and its problematic symptoms are found to worsen, especially regarding girls.

Body image is cited within DSM-IV diagnostic criteria for eating disorders Anorexia Nervosa and Bulimia Nervosa as “self-evaluation unduly influenced by body and shape,” and “disturbance in the way in which one’s body weight or shape is experienced” (APA, 1994). This further establishes the relationship between body image and eating disorders, and the negative implications of poor body image. Binge eating, a prominent risk factor for obesity, is found to coincide with body image as well (Stice et
Obesity is an increasing problem in western civilization with rates nearly tripled since 1980 among children and adolescents (cdc.gov). Body image is found to worsen as BMI increases in girls (Stice & Whitenton, 2002). Stice et al. (2002) suggest that obesity logically promotes dieting with experienced pressure to conform to the thin ideal, but dieting results in binge-eating as a response to caloric deprivation. This also provides an explanation for the connection between dieting and obesity onset (Stice et al., 2002; Stice et al., 1999).

Persons with negative body image are also found to have poor emotional and physical health. The question arises as to what influences a person’s body image to be positive or negative. Longitudinal analysis shows that weight related teasing predicts negative body image over time. Eisenberg et al. (2006) observed such a longitudinal relationship over five years in 12 to 18 year olds. The same relationship is also found to exist concurrently among preadolescents and adolescents. Keery et al. (2005) found a low-moderate relationship between weight teasing and body image among 372 6th to 8th grade females ($r=.31$), and Quinlan et al. (2009) observed a similar relationship among 96 12 to 18 year olds ($r=-.33$). Predominately, weight teasing and body image research is focused on adolescents, and there are a few studies that do not observe such a relationship between body image and weight concern. The first purpose of this study will be to test the relationship of body image and weight teasing in a sample of preadolescent girls in an effort to add to the limited research of these variables on preadolescents.

Perceived social support is considered the most consistent and strongest predictor of personal adjustment (Pierce et al., 1996). In preadolescence, the parent relationship is
the predominate source of social support (Furman & Buhrmester, 1985). Supportive parent-child relationships foster coping skills which reduce the distress of stressful situations, and increase resources for coping. In adolescents, poor social support is found to have relationships with poor body image and eating dysfunction (Ata et al., 2007). For example, in 231 9th and 10th grade students, poor peer support predicted eating dysfunction over ten months, though poor parental support did not (Stice et al., 2002). Friend and Family connectedness are shown to be protective factors for eating dysfunction in adolescents (Hill & Franklin, 1998; Neumark-Sztainer et al., 2007). Though the protective influence of social support and connectedness on eating dysfunction is established, as well as the connection of body image to eating disorders, the influence of social support on the relationship between weight teasing and body image has not been studied. Particularly in preadolescents, social support studies are limited. The second purpose of this study is to examine in preadolescent girls whether social support will have a protective or moderator effect on the relationship between weight teasing and body image. The importance of this research is that it will further expand on body image research among preadolescents, as well as incorporate a novel factor by testing social support as a moderator.

**Major Research Hypotheses and Rationale**

**Hypothesis One**

Weight teasing will show a low-moderate negative relationship with negative body image between $r=-.20$ and $r=-.40$. 
**Hypothesis One Rationale**

In studies examining the relationship between body image and weight teasing in adolescents and preadolescents (Table 1), relationships have been low to moderate, with a range between \( r = -0.21 \) and \( r = -0.41 \) (Keery et al., 2005; Quinlan et al., 2009; Thompson et al., 2005). It is expected that the relationship between the two variables in the present study will be similar to findings of previous research.

**Hypothesis Two**

Social support from adults and peers will moderate the relationship between weight teasing and body image (Figure 1).

**Hypothesis Two Rationale**

Pressure to meet the standards of the societal ideal has been shown to be related to increased weight control behaviors, eating dysfunction, internalization of the thin ideal, and poor body image (Neumark-Sztainer et al., 2007; Ricciardelli & McCabe, 2001; Sinton & Birch, 2006). Family and friend connectedness have shown protective benefits for eating dysfunction and eating attitudes (Croll et al., 2002; Hill & Franklin, 1998; Neumark-Sztainer et al., 2007; Shisslak et al., 1995; Swarr & Richards, 1996). Pressure from parents and peers to align with the societal ideal is shown to be detrimental to body image. On the contrary, having familial and peer connectedness has been shown to protect body image. From this data, it is expected that social support from adults and peers will moderate the relationship between weight teasing and body image.
Table 1.

**Weight Teasing v. Body Image**

<table>
<thead>
<tr>
<th>Author</th>
<th>N (females)</th>
<th>Age/Grade</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donavan et al. (2006)</td>
<td>1207</td>
<td>12-14 yrs.</td>
<td>.21</td>
</tr>
<tr>
<td>Thompson et al. (1995)</td>
<td>169</td>
<td>13-18 yrs.</td>
<td>.29</td>
</tr>
<tr>
<td>Keery et al. (2005)</td>
<td>372</td>
<td>6\textsuperscript{th} to 8\textsuperscript{th} grade</td>
<td>.31</td>
</tr>
<tr>
<td>Quinlan et al. (2009)</td>
<td>70</td>
<td>12-18 yrs.</td>
<td>-.33</td>
</tr>
<tr>
<td>Stice &amp; Whitenton (2002)</td>
<td>496</td>
<td>11-15 yrs.</td>
<td>.39</td>
</tr>
<tr>
<td>Thompson et al. (1995)</td>
<td>210</td>
<td>10-15 yrs.</td>
<td>-.41</td>
</tr>
</tbody>
</table>
Figure 1. Hypothesized relationship between weight teasing and body image as moderated by social support.
CHAPTER IV
METHODOLOGY

Participants
The current study utilized data collected for a larger study which investigated well-being of students in 4th through 7th grade students. The current study had a primary interest in females, thus a total of 251 female preadolescent surveys were used for analysis. Students ranged in age from 9 to 14 years old ($M=11.32$, $SD=1.10$). The sample used for this study was made up of 71% white, 10% biracial, 8% Hispanic, 4% Native American, 4% Asian, and 1% African American. Sample demographics are presented in Table 2.

Measures

The Body Esteem Scale

Body image was measured using the Revised Body Esteem Scale for Children (Mendelson & White, 1993), a 20-item self-report scale which assesses children’s affective evaluation of their bodies and appearance. The scale is suitable for use on children as young as age seven. An adapted form of the Revised Body Esteem Scale was used for purposes of this study, reducing the scale to 13 items (Appendix A). Scale items include, “I’m pretty happy about the way I look,” and “I wish I were thinner.” The responses are reported in a Likert scale format. Possible responses to questions range
Table 2.

*Sample Demographics*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>29</td>
<td>11.6</td>
</tr>
<tr>
<td>5</td>
<td>77</td>
<td>30.7</td>
</tr>
<tr>
<td>6</td>
<td>85</td>
<td>33.9</td>
</tr>
<tr>
<td>7</td>
<td>60</td>
<td>23.9</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>178</td>
<td>70.9</td>
</tr>
<tr>
<td>Bi-Racial</td>
<td>24</td>
<td>9.6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21</td>
<td>8.4</td>
</tr>
<tr>
<td>Asian</td>
<td>11</td>
<td>4.4</td>
</tr>
<tr>
<td>Native American</td>
<td>9</td>
<td>3.6</td>
</tr>
</tbody>
</table>
from strongly disagree (1) to strongly agree (4). The 20 item measure has a strong overall reliability \( r_\alpha = .92 \), and split-half reliability \( r_\alpha = .85 \) (Mendelson & White, 1996).

**McKnight Risk Factor Survey-IV – Weight Teasing Scale**

Weight-related teasing was measured using items from the McKnight Risk Factor Survey, made up of several categorical scales which assess various risk factors involved in the development of eating disorders. The McKnight Risk Factor Survey-III has been strongly correlated with the Eating Disorder Inventory-Body Dissatisfaction subscale \( (r = .85, p < .01) \) (Peltzman, 2007). The McKnight Risk Factor Survey-IV (MRFS-IV) is a new version of the measure, and psychometric properties are currently of limited availability. The MFRS-IV was normed on a population of ethnically diverse girls in California and Arizona. Responses on the MRFS-IV are given in Likert scale format ranging from never (1) to almost always (5). Subscales used for this study include:

**Weight Teasing-Peers** (8 items, e.g., “In the past year how often have other girls made fun of you because of your weight?”) and **Weight Teasing-Adults** (3 items, e.g., “In the past year how often has your father or step father made a comment to you about your weight or your eating that made you feel bad?”). Good reliability for the Weight Teasing domain of the MRFS-IV has been reported for an adapted version of the scale \( r_\alpha = .80 \) (Diaz-Zubieta, 2005). The MRFS-IV Weight Teasing scale which was used for the current study can be viewed in Appendix B.

**Multidimensional Scale of Perceived Social Support**

Social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). Originally a 12-item
self report measure which assesses perceived social support from friends, family, and significant other, the scale was adapted for purposes of this study to include only the friends and family social support questions, which reduced the questionnaire to 8 items (Appendix C), including items such as, “I can count on my friends when things go wrong,” and “I can talk about my problems with my family.” The significant other items were removed from the social support measure for this study due to the young age of the participants. The response format was also adapted and reduced from a 7-point Likert scale to a 5-point Likert format (strongly disagree=1, to strongly agree=5) for the purpose of providing a simple response format to the students. The MSPSS Friends and Family subscales showed good internal reliability in an adolescent sample ($r_a=.92$, $r_a=.81$, respectively) (Zimet, Powell, Farley, Werkman, & Berkoff, 1990).

Procedure

Data was obtained from a larger study of student internet use and social-emotional constructs, conducted by William Reynolds, PhD in 2009. Permission to conduct the study was granted by the Institution Review Board of Humboldt State University. Principals, superintendents, and school psychologists of local Northern California elementary and middle schools were contacted to request permission for participation in the study (for a study description see Appendix D). Seven elementary and middle schools agreed to participate. Informed consent was then obtained from the parents of the student participants via consent forms which were sent home with the students and returned to the students’ teachers (Appendix F). Each teacher was given a packet with detailed instructions for the study and the appropriate number of study consent forms for their
classroom (Appendix E). Parental consent percentages ranged from 21% to 80% among the seven schools. Of all students who were invited to participate in the study, a total of 34% received parental consent. On the day of data collection, three graduate students, including the author, went to the school sites to survey the students. The student participants completed the questionnaires in school venues designated by the school site principal; the cafeteria, gym, or classroom. In most schools, students were sent to the cafeteria or gym to complete the survey. Some schools required data collection to occur in shifts in order to alleviate over crowdedness in the designated survey locations. All students started the survey at once at the time of data collection. Participants were informed by the graduate students about the purpose of the study, that there were no wrong or right answers, and data would be treated confidentially. Student participants were asked to respond honestly to all items on the questionnaire. Most students finished the questionnaire in less than an hour’s time. In some schools, however, to allow low-level readers ample time, some students were given more than an hour to complete the questionnaire. To encourage consent form return rates, pizza parties were held for the classrooms at each school which returned the most signed consent forms, regardless of permissive consent or negative consent.

Data Analysis

Primary Analysis

Hypothesis One. Hypothesis One for this study states that the relationship between weight teasing and negative body image in girls will be negative and low-moderate, between $r=-.20$ and $r=-.40$. A Pearson’s correlation coefficient examined the
strength of the relationship between the predictor variable (weight teasing) and the outcome variable (body image).

**Hypothesis Two.** The second hypothesis for the study states that social support from adults and peers will moderate the relationship between weight teasing and body image in girls. As presented by Frazier, Barron, and Tix (2004), “A moderator is a variable which alters the strength or direction of the relationship between a predictor and outcome variable, establishing for whom or when a predictor variable is more strongly related to an outcome” (p. 116). According to Baron and Kenny (1986), Moderator variables are typically introduced when an unexpectedly weak or inconsistent relationship between a predictor and outcome variable occurs. Inconsistent relationships in different settings or populations are an example of such considerations. Baron and Kenny (1986) posit that there are three causal paths which are fundamental to a moderator study: a) the impact of the predictor variable on the outcome b) the impact of the moderator variable on the outcome c) the interaction of the predictor variable and moderator variable on the outcome (Figure 2). To analyze the relationship of social support as a moderator variable on the relationship between weight teasing and body image, a hierarchical multiple regression analysis was employed, as suggested by Frazier at al. (2004). For purposes of
Figure 2. Moderator Model for Analysis (adapted from Baron & Kenny, 1986).
the regression analysis, the moderator and predictor variables, both continuous variables, were standardized and transformed to z-scores (centering). Z-score transformations of the variables is helpful for interpretation of the regression analysis by providing a meaningful zero-point (Frazier et al., 2004).

**Preliminary Analysis**

Preliminary analysis determined the means and standard deviations of all girls’ body image, weight teasing, and social support scales. Internal consistency reliability was examined for all measures.

**Benefits and Potential Risks**

**Benefits**

Data obtained from each school site were interpreted and shared with the administrators of the schools. This data is useful for targeting appropriate interventions for the student body, particularly for targeting and increasing positive social support in interventions. The data provides valuable information which specifically highlights teasing problems, body image, and social support among the youth. Overall, this study has provided increased knowledge within the studied constructs.

**Potential Risks**

Minimal risk was involved in this study. It is possible that participants may have been concerned with the confidentiality of their answers. It is also possible that the students may have experienced temporary emotional discomfort while completing the questionnaire.
**Risk Management**

Informed consent for participation in the study was obtained from all student participants’ parents. Before filling out the questionnaires, students were informed of the privacy and confidentiality of their responses. Identifying information and names were not gathered for the purposes of the study, securing anonymity for all participants.
CHAPTER V
RESULTS

Preliminary Analysis

The means and standard deviations of all measures for each grade and the total sample are presented in Table 3. A oneway ANOVA was used to test for grade differences in each measure. Body esteem \( (F(3, 247)=8.50, p<.001) \) and weight teasing \( (F(3, 240)=4.56, p=.004) \) yielded significant between groups results, however, social support did not \( (F(3, 236)=1.96, p=.120) \). Post Hoc Bonferroni analysis indicated seventh grade girls’ body esteem was significantly \( (p<.05) \) lower than 4th, 5th, and 6th grade girls’ body esteem. Seventh grade girls reported significantly higher weight teasing than 4th and 6th grade girls.

Reliability was good for all measures: Body Esteem Scale, \( r_\alpha=.92 \); MRFS-IV Weight Teasing Scale, \( r_\alpha=.92 \); MSPSS, \( r_\alpha=.89 \).
Table 3

*Means and Standard Deviations of Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Grade 4</th>
<th></th>
<th>Grade 5</th>
<th></th>
<th>Grade 6</th>
<th></th>
<th>Grade 7</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>N</td>
</tr>
<tr>
<td>Body Esteem</td>
<td>29</td>
<td>37.82</td>
<td>8.65</td>
<td>77</td>
<td>37.77</td>
<td>9.40</td>
<td>85</td>
<td>37.13</td>
<td>8.53</td>
<td>60</td>
</tr>
<tr>
<td>Weight Teasing</td>
<td>29</td>
<td>13.90</td>
<td>5.70</td>
<td>75</td>
<td>15.95</td>
<td>8.40</td>
<td>80</td>
<td>15.47</td>
<td>6.71</td>
<td>60</td>
</tr>
<tr>
<td>Social Support</td>
<td>28</td>
<td>31.10</td>
<td>7.84</td>
<td>75</td>
<td>32.83</td>
<td>7.22</td>
<td>78</td>
<td>30.50</td>
<td>7.51</td>
<td>59</td>
</tr>
</tbody>
</table>

*Note.* Body Esteem (BES), Weight Teasing (MRFS-IV), Social Support (MSPSS).
**Primary Analysis**

**Hypothesis One**
Hypothesis One predicted that the relationship between weight teasing and negative body image would be low-moderate, between $r = -.20$ and $r = -.40$. The relationship between negative body image and weight teasing was $r = -.54$, $p < .001$.

**Hypothesis Two**
Hypothesis Two predicted that social support from adults and peers would moderate the relationship between weight teasing and body image in girls. To test Hypothesis Two, the total scores of the MRFS-IV Weight Teasing scale and the MSPSS Social Support scale were standardized and transformed to z-scores. The weight teasing by social support interaction was created by the product of weight teasing and social support (i.e., weight teasing X social support). The standardized scores of weight teasing and social support were entered as predictors into the regression analysis as the first step, followed by the weight teasing by social support interaction as the second step.

The combination of weight teasing and social support accounted for 45% of the variance of body esteem scores, $R^2 = .452$, $F(2, 236) = 97.20$, $p < .001$. The addition of the interaction variable to the equation added 2% to the total variance, $R^2 = .474$, $\Delta R^2 = .022$, $F(1, 235) = 70.56$, $p = .002$. There were significant main effects for weight teasing and social support in predicting body esteem in Step 1 of the regression analysis ($\beta = -.41$, $p < .001$; $\beta = .42$, $p < .001$). When the interaction variable was entered into Step 2 of the regression analysis weight teasing was no longer significant ($\beta = .09$, $p = .60$). Social support remained a significant predictor for the outcome variable ($\beta = .70$, $p < .001$) in Step 2, and the interaction variable weight teasing by social support was significant,
confirming hypothesis two ($\beta = -0.52$, $p = .002$). The small change in the total regression equation ($\Delta R^2 = .022$) with the introduction of the interaction variable suggests that social support partially moderates the relationship between weight teasing and body image. The results of the regression analysis are presented in Table 4 and a plot representing the multiple regression is presented in Figure 3. It should be noted that the distribution of scores on the measures of social support, body esteem, and weight teasing were characterized by little variation. Few students reported high levels of weight teasing in comparison to the average ratings by the sample. Additionally, the majority of participants reported average levels of body esteem. Similarly, responses for levels of social support were primarily within an average range, with few low scores.
Table 4

Multiple Regression Analysis for Moderation: Weight Teasing, Social Support, and the Interaction between Weight Teasing and Social Support Predicting Body Esteem

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight Teasing</td>
<td>-.418</td>
<td>.051</td>
<td>-.414</td>
<td>8.23</td>
<td>.001</td>
</tr>
<tr>
<td>Social Support</td>
<td>.426</td>
<td>.051</td>
<td>.423</td>
<td>8.40</td>
<td>.001</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight Teasing</td>
<td>.089</td>
<td>.168</td>
<td>.088</td>
<td>0.53</td>
<td>.598</td>
</tr>
<tr>
<td>Social Support</td>
<td>.703</td>
<td>.101</td>
<td>.698</td>
<td>7.00</td>
<td>.001</td>
</tr>
<tr>
<td>Weight Teasing X Social Support</td>
<td>-.525</td>
<td>.166</td>
<td>-.520</td>
<td>3.16</td>
<td>.002</td>
</tr>
</tbody>
</table>

*Note.* Weight Teasing (MRFS-IV), Social Support (MSPSS).
Figure 3. Social Support by Weight Teasing on Body Esteem.
CHAPTER VI
DISCUSSION

Introduction

The aim of the current study was to examine in a female preadolescent sample the variables of weight teasing and social support, and these variables’ relationship with negative body image. The current study provides evidence of a moderate relationship between weight teasing and negative body image in preadolescent girls. In addition to this finding, the current study found that the relationship between weight teasing and negative body image was partially moderated by social support.

Body image is an important concept in the development of youth’s self evaluation and emotional stability. Studies have shown that preadolescents and adolescents who suffer with poor self-esteem are also suffering with poor body image (Davison & McCabe, 2006; McCabe et al., 2006). In preadolescents and adolescents, poor body image is related to increases in BMI (Davison et al., 2003; Mendelson & White, 1996; Styne, 2004). BMI increases in females occur over time due to increased adipose tissue as a result of pubertal development (Papalia et al., 2007). Increases in BMI also occur over time in girls who are already overweight prior to onset of puberty (Stice, 2003). Increased adipose tissue is a characteristic of pubertal development in females, and as girls’ weight increases, their shape becomes increasingly separate from the societal thin ideal, causing increased body dissatisfaction (Stice & Whitenton, 2002). Current evidence indicates that girls are developing pubertal characteristics at younger ages than ever (Herman-Giddens,
et al., 1997), and girls who are already overweight or obese are more likely to experience early pubertal development (Styne, 2004; Tremblay & Lariviere, 2009). Tremblay and Lariviere (2009) found that regardless of age, girls who experienced pubertal onset were engaging in weight control behaviors. Girls with higher BMI had higher weight concerns, and girls who developed earlier than their peers experienced higher rates of peer victimization and lower rates of positive peer interaction (Compian, Gowen, & Hayward, 2009). The findings of Compian et al. (2009) suggest that girls developing at an earlier rate than their peers may be lacking social support from their same age peers who are not going through the same changes. The separation of girls’ physical appearance from their peers’ and a lack of positive social support influence the onset of depression, which has also been found to have a relationship with early pubertal development (Kaltiala-Heino, Kosunen, & Rimpela, 2003).

With girls experiencing pubertal characteristics and body image issues at earlier ages than ever, it is extremely important to understand how our society can slow or prevent body image issues from having a deleterious effect on the youth’s self-image, as well as understand which factors protect one’s body image. As the young girl’s body deviates from the thin ideal and progresses through pubertal development, she becomes subject to weight and eating dysfunction (Rosenblum & Lewis, 1999), pressure to lose weight (Ata et al., 2007; Sinton & Birch, 2006; Ricciardelli & McCabe, 2001), poor body image (Mendelson & White, 1996), depression, low self-esteem (Stice et al., 2002), and weight teasing (Neumark-Sztainer et al., 2007). Despite the many risk factors associated with poor body image, Ludden and Lally (2007) found that high levels of social support
were related to healthier body image in adolescents. Given the limited research on social support and body image, as well as a limited number of studies focused on preadolescent weight teasing, social support, and body image, the current study was developed in an effort to increase current knowledge regarding these variables in preadolescent females.

**Preliminary Study Results**

The preliminary study results showed that seventh grade girls had significantly lower body esteem than all other grades. This age effect is consistent with child and preadolescent research (Flanner-Schroeder & Chrisler, 1996; Mendelson & White, 1996), as well as adolescent research (Rosenblum & Lewis, 1999) which has determined that with age body image worsens. As the female approaches puberty, the discrepancy between the child’s current figure and the ideal figure widens. The discrepancy occurs due to an increase in weight, widening of hips, and development of breasts, which separate the youth from society’s thin ideal (Stice & Whitenton, 2002). This discrepancy leads the child to use measures to reduce weight in effort to attain the ideal figure. Swarr and Richards (1996) support this theory with their research on preadolescent females and their findings that girls who perceived early breast and pubertal development had more weight and eating concerns.

Weight teasing was also significantly higher in 7th grade girls than 4th grade and 6th grade girls. This age trend is complementary to the age effect of body esteem. With age, weight teasing shows a general increase for preadolescents, and with age body esteem worsens. Donavan et al. (2006) found that girls who were upset by weight teasing
had poorer body image, were more preoccupied with their weight, and engaged in more weight restriction strategies.

Seventh grade girls experienced a significant increase in negative body image as well as a significant increase in weight teasing. The differences between the elementary grade reports and the 7th grade reports highlight the middle school experience. By seventh grade, many girls are already undergoing pubertal changes. Girls are experiencing increased examination of themselves and others at this time. Additionally, 7th grade classes are often scheduled with 8th grade classes, characterized by older, more developed classmates, and more mature social interactions such as flirting. Girls may be experiencing greater degrees of relational aggression, including weight teasing, which influences self-consciousness and self-examination (Bollmer et al., 2003), having further influence on body image. The developmental stage of 7th grade girls may play a significant role in the increases of negative body image and weight teasing.

**Primary Study Results**

**Hypothesis One**

The relationship of the weight teasing and body image variables was slightly stronger than hypothesized, a moderate correlation of $r = -.54$. In a similar study of 210 females ages 10 to 15, Thompson et al. (1995) observed a relationship that was stronger than any other to date ($r = -.41$). Similarly, Stice and Whitenton (2002) observed a comparable relationship between weight teasing and body image in 496 females ages 11 to 15 ($r = -.39$). Quinlan et al. (2009) and Thompson et al. (1995) each examined the variables among females between the ages of 12 and 18. The correlations of the variables
were weaker in each of these studies in comparison to the preadolescent sample studies, and ranged from \( r = .24 \) to \( r = -.33 \). However, Quinlan et al. (2009) studied a sample of girls attending a residential weight loss camp, which is not a randomized sample design and focuses on an overweight population. The correlation between weight teasing and body image from the current study appears to support the theory that younger samples yield stronger correlations between the two variables. However, when taking a look at the mean age of each study presented in Table 1, this trend was not verifiable and did not appear to hold true (Table 1). Additionally, not all studies reported the mean age of their sample so the comparison of age and correlations was limited to few studies.

In the current study, weight teasing increased with age. The findings cannot be conclusively proven in the current study, but imply that preadolescent girls tend to engage in increasingly greater weight teasing as they approach adolescence. During that time, girls who suffer from weight teasing are likely examining themselves to a great degree, which may influence their body image, how they view themselves in light of their appearance. It is important to note that the age trend was viewed within a cross-sectional study of several grades, and is not a longitudinal trend as measured by the current study.

The current study found a moderately strong relationship between weight teasing and body image variables. The current study and Thompson et al. (1995) examined these variables in a sample that was located in rural areas. The remaining studies took place in metropolitan areas within public school settings. The differences between sample characteristics may indicate that in rural samples weight teasing is a more prominent factor relating to body image, and in metropolitan samples the relationship is less
significant due to other factors which also participate in the relationship with body image. Research has shown that exposure to media, including television, advertisements, and magazines which portray the thin ideal is related to decreases in body image (Striegel-Moore & Franko, 2002). Residents of metropolitan areas may have higher exposure rates to such media by billboards, advertisements, and focus on local pop culture trends, whereas those in rural areas may not be as influenced by the media, but more by their immediate social influence of peers and family. It should also be noted that all studies used different measures of these variables which may also contribute to differences across investigations.

**Hypothesis Two**

Hypothesis Two hypothesized that social support would moderate the relationship between weight teasing and body image. Until now, research has not examined social support as a moderator of the relationship between weight teasing and body image in girls.

The interaction effect showed that preadolescent girls who reported high weight teasing levels reported poor body image, and social support partially buffered this relationship. In other words, those who experienced high weight teasing, but also experienced high social support, had better body image than those who lacked social support and had high weight teasing. However, in the current study the sample predominately reported low rates of weight teasing and high rates of social support. The average reports of levels of weight teasing and social support are desirable for the well-being of the children, however, more variability in scores may have provided a larger
effect size for the moderation of social support on the interaction variable. Predominately, the current sample reported average levels of weight teasing, social support, and body image.

Stice and Whitenton (2002) presented a study related to the current study by examining social support and weight teasing variables on body image in 496 11 to 15 year old females. Over one year, social support predicted poor body image in adolescent females. Stice, Spangler, and Agras (2001) performed an experimental study of 219 13 to 17 year old female adolescents which exposed the subjects to fashion magazines over 15 months. The authors found that girls who reported social support rates which were one standard deviation below the mean at time 1, reported subsequent decrease in body dissatisfaction at time 2. Thus, social support moderated the relation of the experiment to growth in body dissatisfaction. Croll et al. (2002) also found that adolescents’ strong family and friend connections were protective against eating dysfunction, which has also been linked with poor body image (McKnight Investigators, 2003). Despite a small effect size, this study further supports the concept that social support provides benefits for dysfunctional eating behavior and body image constructs. Evidentially, social support has beneficial relationships on body image and eating dysfunction variables.

**Summary**

Results of the current study indicated a partial moderation effect of social support on the relationship between weight teasing and body image, and support for Hypothesis Two. The strength of relationship in the simple correlation analysis in Hypothesis One between weight teasing and body image was moderate and stronger than predicted.
Preliminary analyses showed that body image was lower with increased age and weight teasing increased with age in preadolescent girls. Additionally, the current study showed a general but insignificant decrease in family social support with age.

Limitations

This research examined body image, social support, and weight teasing in girls ages 9 to 14 years. Interpretation of the findings is limited by several factors. First, the sample predominately reported low rates of weight teasing and high rates of social support, which limits the findings. Next, there is a lack of longitudinal evidence examining the effects of variables on the outcome of body image. Adolescent studies have yielded insignificant relationships over one year between weight teasing and body image. However, in concurrent studies of preadolescents and adolescents, significant correlations have been found. Thus, a longitudinal design may be helpful in determining the long term effects of weight teasing particularly in preadolescent females.

Finally, the current study did not examine BMI in the sample. This is a limitation due to current research showing that in all age groups, as BMI increases, body image becomes poorer. With the inclusion of BMI data, one can control for BMI as well as determine if those with higher BMI scores are suffering most from teasing and its effects.

Recommendations for Future Research

Because of the lack of research in preadolescents, it is recommended that future research further examine predictors of body image within this age group. Additionally, longitudinal study designs are recommended for a complete examination of predictors on body image in children. Additional predictors to be considered in a study design should
include BMI, media and environmental influences, social pressure to be thin, weight teasing, and social support on the outcomes of body image in preadolescents. Additionally, comparison of independent samples in rural and metropolitan areas would be beneficial to further understand the differences between the two environments on differences in factors of body image.

Conclusion

The overall findings of the current study provided support for the hypothesis that social support moderates the relationship between weight teasing and negative body image. Within a correlation analysis, weight teasing showed a moderate relationship with negative body image. This was a stronger relationship than other studies have found that examined the same variables in a correlational relationship. The current study also yielded a relationship that was stronger than predicted by hypothesis. The current study is unique for its young sample and is the first to look at weight teasing and social support variables on body image in preadolescent females. The current study has added to the literature by its use of a younger sample as well as by the results of the study. Given today’s constantly advancing world of technology and media, body image can naturally be influenced by a number of factors. The suggestion of longitudinal evidence for social support and examination of other related factors such as social pressure to be thin in children living in metropolitan and rural areas deserves further examination and attention.
REFERENCES


APPENDIX A

BODY ESTEEM SCALE
The following questions are designed to ask you how you feel about your body and your appearance. Please circle any one number:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I like what I look like in pictures.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>I’m pretty happy about the way I look.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>My weight makes me happy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>I like what I see when I look in the mirror.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>I wish I were thinner.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>There are lots of things I’d change about my looks if I could.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7.</td>
<td>I’m proud of my body.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8.</td>
<td>I really like what I weigh.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9.</td>
<td>I wish I looked better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>I think I have a good body.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11.</td>
<td>I’m looking as nice as I’d like to.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td>I’m as nice looking as most people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>I worry about the way I look.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX B

MCKNIGHT RISK FACTOR SURVEY-IV (MRFS-IV)
Please circle only one number that best describes you over the past year.

<table>
<thead>
<tr>
<th>In the past year</th>
<th>Never or almost never</th>
<th>A little</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Always or almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often have girls (including sisters) made fun of you because of your weight?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often have you changed your weight so that you would not be teased by boys (including brothers)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often have boys (including brothers) made fun of you because of your weight?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often have you changed your weight so that you would not be teased by girls (including sisters)?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>If boys (including brothers) have teased you about your weight, how much has it changed the way you feel about yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How much do you think your weight made boys NOT like you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>If girls (including sisters) have teased you about your weight, how much has it changed the way you feel about yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How much do you think your weight made girls NOT like you?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often has your father or stepfather made a comment to you about your weight or eating that made you feel bad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often has a teacher or coach made a comment to you about your weight that made you feel bad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>How often has your mother or stepmother made a comment to you about your weight or eating that made you feel bad?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX C

MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MSPSS)
<table>
<thead>
<tr>
<th>In general:</th>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither agree or Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>My family really tries to help me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I get the emotional help and support I need from my family.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My friends really try to help me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can count on my friends when things go wrong.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can talk about my problems with my family.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have friends that I can share my happy times and sad times with.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My family is willing to help me make decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I can talk about my problems with my friends.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Internet and Cell Phone Use and Social and Personal Well-Being of Young Adolescents

Study Description

Dr. William Reynolds, Jenna Barry, Brittaini Graham, and Audra Gosvener
Department of Psychology
HUMBOLDT STATE UNIVERSITY

The widespread use of the Internet and its many applications (email, text messaging, networks, websites, blogs, chat rooms, instant messaging, etc.) as well as cell phone use provides numerous avenues for children and adolescents to interact with one another as well as engage in both productive and undesirable activities. Bully and harass their peers. Some Internet venues allow for anonymous bullying, or bullying with false identification. Likewise, the opportunity for broad, public humiliation or harassment of peers makes the Internet appealing to some young people. Research on teen and adult Internet use is constantly expanding; however, little information exists on pre- and early adolescent Internet use. It is important that educators and researchers increase their awareness of how students are using the Internet and how such use is related to social and well-being (PEW Internet Study, 2008).

The purpose of the current project is to increase our understanding of pre- and early adolescents’ Internet use and how their Internet use relates to social and emotional well-being. This project is being conducted with students in grades 4 through 7. Students for whom parental consent is given will be requested to complete a paper-and-pencil survey that will take about 45 to 50 minutes. The survey will include questions about students’ Internet and cell-phone use, bullying behavior including Cyber bullying, and questionnaires related to mood, body esteem, social support, and related aspects of well-being, such as depression. Procedures for the administration of the survey will be determined in consultation with school personnel. This research has been reviewed and approved (#08-102) by the Institutional Review Board at HSU.

At the conclusion of the study, we will provide schools with a summary of the results specific to their school sample.

Please contact Dr. William Reynolds at wr9@humboldt.edu or 707 826-3162 if you have any questions. Thank you.
APPENDIX E

TEACHER LETTER
Dear Teacher:

Thank you for taking the time to assist us with our research project. Your assistance is greatly appreciated and very important to the success of this project.

Please give each student in your class a copy of the study information sheet with the attached consent form and ask them to take this home to their parents and return it to the school within the next three days. Please let the office know if you do not have enough forms for your students.

Over the next several days, please remind students to return the forms. If students have lost or misplaced their forms, there should be extra forms in the school office. After three days, please ask any students who have not returned forms to do so.

Depending on the preference of your school administration, students will return the consent forms to the main office or to you. If you are collecting the forms, we will provide an envelope for you to keep the returned forms as they come in. It would be helpful if you would keep a running count of the number of returned consent forms.

Once again, we greatly appreciate your assistance.
APPENDIX F

PARENT LETTER AND CONSENT FORM
Dear Parent or Guardian:

We are writing to ask permission for your child to take part in a research project that is being conducted at your child’s school. Dr. William Reynolds, Professor of Psychology at Humboldt State University along with graduate students Jenna Barry, Brittaini Graham, and Audra Gosvener are conducting a research project examining pre- and young adolescents’ use of the Internet and cell phones and how such use relates to their social and personal well-being. We are also examining bullying and teasing behaviors in students. This project will involve students in grades 4 through 7 who will complete a paper-and-pencil survey. The survey will take about 45-50 minutes and include questions about their internet and cell phone use and surveys of bullying, and social and personal well-being that have been used with other students in school settings.

No information collected as part of this study will identify your child or your family. Your child’s responses will be completely anonymous, which means that your child will never be asked to provide a name or any other identifying information on the survey. The cumulative results of this study may be published. We anticipate that we will provide your child’s school with a summary of students’ Internet use and related information; although no individual student information will be reported. All data/documentation collected as part of the project will be kept in a secure file at HSU.

We do not anticipate that your child will be exposed to any risks while participating in this study. The survey will include questions about their Internet and cell phone use and measures of bullying and social and personal well-being that have been used with students in school settings and there have been no ill effects from answering the questions. Possible risks include mild fatigue or feeling embarrassed. Your child will also be informed that they may refuse to participate when the survey is administered and that they may stop at any time. Participation is voluntary and there will not be any remuneration for your child’s participation. This research has been reviewed and approved (#08-102) by the Institutional Review Board at HSU.

It is important that educators and researchers increase their awareness of how students are using the Internet as well as any problematic cell-phone use. The information collected for this study may be beneficial to both local schools as well as a wider group of educators and researchers.

If you have any questions about this research you may contact William Reynolds at 707 826-3162, wr9@humboldt.edu or Chris Hopper, Dean of Research & Graduate Studies at 826-3949, cah3@humboldt.edu.

Your child’s school administration has reviewed this project and feels that it is of potential value to the school.

Please complete the Consent Form on the next page indicating if you will allow your child to participate in this study. If you do not give permission, please note this on the form.

We would greatly appreciate it if you would have your child return the attached form to his or her school within the next three days. Forms may be returned to the main school office.

Thank you in advance for considering your child’s participation in this project.
HUMBOLDT STATE UNIVERSITY

Internet and Cell Phone Use and Social and Personal Well-Being of Young Adolescents

INFORMED CONSENT FORM

I have read the attached form describing the study on Internet Use in grade 4 through 7 students and I understand that my child’s participation in this research is voluntary, and that my child may withdraw from the study at any time without jeopardy.

Please check one of the two options below and have your child return this form to the school within three days

___ I give informed consent for my child to participate in this study.

___ I do not give informed consent for my child to participate in this study.

Child’s full name (please print) ___________________________ Grade: __________

Parent/legal guardian’s printed name ______________________________________

Parent/legal guardian’s signature ___________________________ Date ______________

Thank you for your consideration of this request. Please have your child return this form to the school office as soon as possible.