Am I Too Fat To Be A Princess? Examining The Effects Of Popular Children's Media On Preschoolers' Body Image

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AM I TOO FAT TO BE A PRINCESS? EXAMINING THE EFFECTS OF POPULAR CHILDREN'S MEDIA ON PRESCHOOLERS' BODY IMAGE

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ABSTRACT

The current study investigated the effects of brief exposure to appearance-related media on female preschoolers' body image. Results indicated that exposure did not affect body dissatisfaction or engagement in appearance-related play behaviors. Surprisingly, participants' self-reported frequency of weight concerns decreased at posttest. In contrast to older populations, it is possible that young children may adopt the persona of attractive characters with whom they identify rather than comparing themselves to the characters. This level of identification temporarily may alleviate weight concerns. This is the first empirical study to provide support for previous findings that suggest media exposure does not affect body image in young children. Also presented are data regarding familial influences and other media consumption (e.g., television viewing) on girls' body dissatisfaction.

This work is dedicated to children everywhere. May you always appreciate the magnificence of your body for the functions it serves – you only get one, so treat it well and think kindly of it often.

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INTRODUCTION

Much of the research examining body image and eating behavior is concentrated heavily on adolescent and young adult females. However, recent literature suggests that girls as young as 6-years-old experience body dissatisfaction, as evidenced by a preference for an ideal figure that is thinner than their perceived current body size (Ambrosi-Randic, 2000; Davison, Markey, & Birch, 2003; Dittmar, Halliwell, & Ive, 2006; Dohnt & Tiggemann, 2004, 2005, 2006[a]; Lowes & Tiggemann, 2003). Results are generally mixed with regard to body dissatisfaction in children younger than 6-years-old (e.g., Dohnt & Tiggemann, 2005; Hendy, Gustitus, & Leitzel-Schwalm, 2001; Lowes & Tiggemann, 2003). For instance, approximately 28% of 5-year-old girls in one sample desired a thinner body (Dohnt & Tiggemann, 2005), whereas close to 60% of 5-year-old girls in a different sample desired a heavier body (Dohnt & Tiggemann, 2006[b]).

Researchers using alternative methods of assessment (e.g., interview) reported that some children as young as 5-years-old are concerned about their weight (e.g., Abramovitz & Birch, 2000; Davison, Earnest, & Birch, 2002; Davison, Markey, & Birch, 2000). Approximately 20% of the 5-year-olds sampled by Davison and colleagues (2000) reported experiencing weight concerns at least some of the time. These concerns were associated with self-reported body dissatisfaction but were unrelated to participant body mass index (BMI). Longitudinal data indicated that body dissatisfaction and weight concerns at the age of 5 were predictive of future reports at the ages of 7 and 9 (Davison et al., 2003). This study also reports that dieting and, in some cases, problem eating behaviors are more prevalent in 9-year-old girls who display signs of body dissatisfaction

and weight concerns at younger ages than those who do not. Additionally, many male and female children as young as 5-years-old are aware of the "thin ideal" that exists in Western society and are able to identify dieting as a method used in order to attain the ideal, thin body (e.g., Davison et al., 2000; Dohnt & Tiggemann, 2004, 2005, 2006[a]; Lowes & Tiggemann, 2003). Due to studies like these that report awareness of the thin ideal and associations between body dissatisfaction and weight concerns in young children, it is not surprising that other researchers focus their studies on the underlying factors that may contribute to the onset of a disturbance. One way researchers are focusing on underlying factors is by exploring sociocultural influences, such as family, peers, and the media – just like they have done with older populations.

It has been argued that the internalization of sociocultural ideals (thin is good, fat is bad) is a contributing factor to the development of body image disturbance, weight concerns, and possibly even disturbed eating behavior (e.g., Levine & Smolak, 1996; Myers & Biocca, 1992; Sands & Wardle, 2003; Striegel-Moore & Cachelin, 1999; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Tiggemann, 2002). With regard to sociocultural factors affecting body image, parents and peers both are cited as contributing agents in the internalization process of the thin ideal for children. Parental appearance-related feedback generally increases with children's age (Striegel-Moore & Kearney-Cooke, 1994) and, along with parental body image, is associated with children's body image (e.g., Lowes & Tiggemann, 2003; Sands & Wardle, 2003; Smolak, Levine, & Schermer, 1999). Maternal body image also is associated with child body image in girls as young as 5-years-old (Davison et al., 2000). Further, maternal body image is often reported as more influential than that of fathers (e.g., McCabe & Ricciardelli, 2005;

Smolak et al., 1999). Findings are inconsistent, however, as other studies suggest that paternal body image or feedback, independent of child BMI, may be more impactful (e.g., Agras, Bryson, Hammer, & Kraemer, 2007; Thelen & Cormier, 1995). Parental appearance-related teasing is also associated with more body dissatisfaction in children as young as 8-years-old (Phares, Steinberg, & Thompson, 2004).

In addition to parental factors, peer relationships also play a role in children's body image satisfaction. For instance, exposure to adolescents in a school setting is related to more body dissatisfaction, weight concerns, and dieting experiences in children as young as 9-years-old (Wardle & Watters, 2003). Perceptions of peer body dissatisfaction and engagement in appearance-related conversations with peers are related to older children and adolescents' own body dissatisfaction (e.g., Clark & Tiggemann, 2006; Lieberman, Gauvin, Bukowski, & White, 2001; Sands & Wardle, 2003). The relationship between perceived peer body dissatisfaction and own body dissatisfaction is not significant for children younger than 7-years-old (Dohnt & Tiggemann, 2006[a]). Researchers suggest that null findings for children younger than 6-years-old are related to the fact that they typically do not report conversing about their physical appearance in the same way that older children do (Dohnt & Tiggemann, 2006[a]).

In addition to parents and peers, the role of the media is often studied and cited as another important sociocultural influence on body image (for reviews, see Levine & Smolak, 1996, and Tiggemann, 2002). Recent cross-sectional studies have implicated media exposure via magazines and television programs as a factor contributing to children's internalization of the thin ideal and body image concerns, especially for older children (e.g., Dohnt & Tiggemann, 2006[a], 2006[b]; Harrison & Hefner, 2006). Assessment

of body dissatisfaction for participants' future adult self also is associated significantly with media consumption (Harrison & Hefner, 2006). Similar to other sociocultural factors, however, studies fail to reveal a correlation between self-reported media exposure and body dissatisfaction in children (Harrison, 2000; Sands & Wardle, 2003). Collectively, results of extant literature indicate that sociocultural factors associated with body dissatisfaction in older children, adolescents, and adults may not affect young children to the same magnitude. The age of 6-years-old appears to be a particularly significant age for many children, especially girls, as it is the age during which sociocultural factors appear to begin forming stronger associations with measures of body dissatisfaction. Children younger than 6-years-old are clearly not immune to the culture given that a surprising percentage of them express weight concerns and, although statistically nonsignificant, indicate a preference for thinness (e.g., Davison et al., 2000, Dohnt & Tiggemann, 2005). The cultural impact extends to the development of implicit and explicit weight biases and preferences (for review, see Latner & Schwartz, 2005).

Sands and Wardle (2003) acknowledge that beauty ideals are influenced heavily by culture and that the "prototypical woman portrayed by the Western media is thin" (p.194). Adults, adolescents, and children, specifically females, tend to be attracted to figures that they believe are thinner than their current size (Ambrosi-Randić, 2000; Collins, 1990; Tiggemann & Lowes, 2002; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002). Conversely, they are repelled by endomorphic figures (Smolak & Levine, 1994; Tiggemann & Anesbury, 2000). Children, like adults, seem to subscribe to the "what is beautiful is good" philosophy (Dion, Berscheid, & Walster, 1972, p. 285). Negative stereotypes are typically reserved for the obese (Gilbert, 1998; Harris, Harris, &

Bochner, 1982; Tiggemann & Anesbury, 2000; Tiggemann & Wilson-Barrett, 1998). In a study conducted by Tiggemann and Anesbury (2000), 96 children ranging in age from 8- to 12-years-old were shown a normal-weight and obese figure drawing of a child or adult side-by-side and asked to choose the figure that they believed would be friendlier, happier, lazier, smarter, healthier, more attractive, more confident, and a harder worker. Results of this study indicate that children choose the normal-weight child figure as being liked best and the preferred friend or playmate. As in other studies, the children often rate the obese adult figure as being lazier, unattractive, less happy, less hard working, and less healthy. Children as young as 5-years-old also assign negative characteristics to larger, rounder body types (Brylinsky & Moore, 1994; Penny & Haddock, 2007). Evidence suggests that even 3-year-olds discriminate implicitly against the obese (Cramer & Steinwert, 1998). As a result of recent literature that illustrates the apparent biases and ideals children possess, some researchers have persisted in their examination of the role that media targeted at children plays in the development and maintenance of these feelings.

Levin (1994) reports that the average American child exhausted up to 35 hours per week watching television and/or playing video games. Even toddlers are watching quite a bit of television, with the average 2-year-old viewing approximately 10.5 hours per week and the average 4-year-old viewing 17.5 hours per week (Liebert & Sprafkin, 1988). When queried about their favorite pastimes, children frequently refer to watching television (Gilbert, 1998). Gilbert (1998) reports that young children often are seen imitating their favorite sports, movie, or television star and that they appear to exhibit heightened levels of confidence when they engage in these play behaviors. Interestingly,

Gilbert also reports that some of his 5- and 6-year-old participants identify animated cartoon characters as resembling them more frequently than their own family members or peers. He notes that these animated figures often depict "human like figures" that some children tend to misidentify as "real." In many cases, it is impossible for a child or adolescent to attain the ideal portrayed by their favorite character, animated or not.

A content analysis of popular children's media, including twenty-five children's videos and twenty children's books, was conducted recently (Herbozo, Tantleff-Dunn, Gokee-LaRose, & Thompson, 2004). An analysis of the videos reveals there is an average of 8.7 body image-related messages per film, with 12 animated films including 10 or more body image-related messages. The analysis of children's books reveals an average of 2.8 body image-related messages, with 5 books containing 5 or more body image-related messages. The researchers consistently document that the physical appearance of characters often is valued more than any other quality the characters may possess. "Good" characters often are depicted as beautiful and thin. Further, attractiveness is associated with sociability, kindness, contentedness, and success. In contrast, "evil" is linked more readily to obesity, cruelty, and general unattractiveness. Obese characters, as animated humans or animals, are not received well by other characters. Results indicate that more importance is placed on female beauty and physical appearance than on males' physical appearance. Overall, media aimed specifically at children clearly depict an unrealistic thin ideal. Results of studies conducted by Klein and Shiffman (2005, 2006) echo these findings, even in animated television shows lasting less than 30 minutes. Klein and Shiffman (2005, 2006) also note that the number of thin characters depicted in children's animated shows has increased steadily since the 1950s,

whereas the number of overweight characters has decreased. From their findings, researchers suggest that the internalization of these images may promote body image disturbance and problem eating behaviors – just like non-animated media (Herbozo et al., 2004; Klein & Shiffmann, 2006).

Many researchers suggest a need for future studies to examine the development of body image and weight concerns with young children, as well as sociocultural factors that may contribute to and reinforce cultural ideals and biases (e.g., Davison et al., 2003; Herbozo, et al., 2003). Despite these suggestions, relatively little literature has been produced. One explanation for the dearth of studies focusing on young children's body image can be attributed to the lack of available measures shown to possess sound psychometric properties with younger age groups. Body image measures for children are adapted frequently from measures standardized on adult populations (Collins, 1991; Gardner, 2001; Truby & Paxton, 2002). In fact, many are not reliable for use with children younger than 8-years-old (Gardner, 2001; Mendelson & White, 1982). For instance, figural stimuli are employed frequently to assess the discrepancy between children's ideal and perceived self (Gardner, 2001; Offman & Bradley, 1992; Tiggemann & Wilson-Barrett, 1998). Figural drawings also can supplement questions, making items simpler and potentially easier for young participants to answer by presenting them with an alternative to verbal responses (Collins, 1991; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002). There is no psychometric data to support their use with children younger than 8-years-old, however (Gardner, 2001; Gardner, Urrutia, Morrell, Watson, & Sandoval, 1990). Additionally, Dohnt and Tiggemann (2006[b]) report that there is no documented relationship between self-report responses of body dissatisfaction and ideal

and current size ratings using a figural scale. Other problems regarding the use of figural scales are the age-appropriateness of the drawings and the use of stereotypical Caucasian features (Byrne & Hill, 1996; Collins, 1991; Gardner, 2001; Tiggemann & Wilson-Barrett, 1998; Truby & Paxton, 2002). In order to accurately assess body image concerns, ideals, and biases in very young children, the development of a psychometrically sound measure will be required. Alternatively, researchers could utilize other methods of measurement, such as behavioral observation.

In addition to age-adapted measures, past research focusing on young children's body image has relied heavily on self-report methods that have questionable reliability (Davison et al., 2000; Lowes & Tiggemann, 2003). Within the literature, there is also a significant lack of observational data (Hendy et al., 2001), which is surprising considering the cognitive and attentional limitations and difficulties younger children experience (Gardner, 2001; Truby & Paxton, 2002). Again, observational data could eliminate the stress placed on the child participant and the researcher, as it would reduce significantly the amount of interactions and time needed to collect data and eliminate several possible threats to validity.

Another deficit in research focused on young children's body image is the relative absence of empirical studies. Relevant to examining the effects of media, many empirical studies using adolescent and adult participants rely on exposure methods (e.g., Durkin & Paxton, 2002; Hargreaves & Tiggemann, 2003; Harrison & Cantor, 1997; Heinberg & Thompson, 1995; Stice & Shaw, 1994; Stice, Spangler, & Agras, 2001). To date, only one experimental study examines the effect of exposure to appearance-related stimuli on young girls' body image (i.e., Dittmar et al., 2006). Dittmar and colleagues (2006)

exposed 5- to 8-year-old girls to a storybook containing illustrations of Barbie dolls (unrealistic figure), Emme dolls (average-sized figure), or no dolls (control condition). Children sat in a group and were assigned randomly to one of the three books, which they then were asked to flip through as a story was read aloud. Body dissatisfaction was assessed using a figure rating scale. Findings of this study suggest that children exposed to the Barbie book exhibit greater body dissatisfaction compared to the other groups. However, this effect is observed only for the younger age groups (5.5 to 7.5-years), with girls older than 7.5-years showing no effect from exposure to the Barbie images. The researchers suggest that dolls like Barbie may serve as agents of social comparison for younger girls, just as peers and adolescents do for older children. Given that body dissatisfaction is observed in participants younger than 6-years-old, Dittmar and colleagues urge researchers to persist in the exploration of body image development in young children. Herbozo and colleagues (2003) also suggest that an empirically based exposure study would contribute significantly to the further understanding of media's contribution to the development of body dissatisfaction, body ideals, and biases in young children.

Thus, the aim of the present study was to examine the effects of exposure to popular animated children's media on preschool-aged girls' body image, ideals, biases, and behaviors. It was hypothesized that exposure to appearance-related media would result in more appearance-related play behavior (e.g., spending more time in front of the mirror, playing dress-up more, playing with a vanity) than demonstrated by children in the control group. A second hypothesis was that children exposed to appearance-related media would exhibit greater body dissatisfaction as evidenced by a discrepancy between

their ideal and perceived current body size using figural stimuli. Additionally, it was hypothesized that appearance-related teasing by family members would be related to more body dissatisfaction. Finally, it was hypothesized that girls with mothers who placed emphasis on their own physical appearance and had high trait body image anxiety would exhibit more appearance-related behaviors.

METHOD

Participants

Participants were recruited from local preschools and elementary schools, e-mail solicitations via a weekly newsletter sent to employees of a large metropolitan University, and flyers distributed (see Appendix A) at local libraries, pediatrician offices, and shopping centers throughout two counties. Informed consent was obtained from a parent of each participant. Consent forms provided a description of the study, procedure, and risks and benefits attributable to the child's participation (see Appendix B). As compensation for participation, all parents and legal guardians were offered the opportunity to receive a brief assessment of their child's general intellectual strengths and weakness as assessed by the Kaufmann Brief Intelligence Test – Second Edition (4- to 6-year-olds) or the Wechsler Preschool and Primary Scale of Intelligence – Third Edition (3-year-olds).

Participants were 58 mother/daughter dyads from a metropolitan area in the Southeast. Data were collected from seven additional girls; however, data from their mothers were not available due to lack of completion (parent did not return completed survey packet [$n = 6$] or parent was a non-native reader of English [$n = 1$]. Girls ranged in age from 3- to 6-years-old ($M = 4.15$, $SD = 1.06$) and were predominantly Caucasian (58.5%; 15.4% Biracial; 6.2% African American; 6.2% Asian; 4.6% Hispanic; and 9.2% did not provide a response). The majority of children were of a healthy weight based on maternal report of height and weight (41.5% with a BMI in the 5th to 85th percentile based upon age; 15.4% overweight [BMI $\geq$ 95th percentile]; 12.3% at risk for overweight [85th

percentile < BMI > 95th percentile]; and 6.2% underweight [BMI < 5th percentile]. Mothers, who served as informants, ranged in age from 23- to 50-years-old (*M* = 35.90, *SD* = 5.82). Mothers provided parental employment titles which indicated the vast majority held professional jobs (e.g., executives, professors, lawyers) or were full-time students. Their report (*n* = 28) indicated that the girls watched an average of more than 10 hours of television per week (*M* = 11.18, *SD* = 9.03; range = 3 hours to 47.5 hours). With regard to Disney DVDs, girls (*n* = 38) owned, on average, 22 DVDs (*SD* = 19.94; range = 0 to 75).

Measures

Ten children participated in a pilot study to assess and refine all included measures. Pilot study results helped to inform the methodology of the current study, and information about pilot data is provided within each relevant section.

Video stimuli. Children in the experimental group were shown a video containing appearance-related clips from ten animated children's movies (e.g., Cinderella, Barbie and the Nutcracker, Little Mermaid, Anastasia; see Appendix C for complete list). These clips included only animated characters. Herbozo and colleagues (2004) report that eight of the ten films selected for the current study contained at least ten appearance-related messages. The remaining two films (Barbie series) were not included in the Herbozo et al. content analysis. One to three clips were selected from each animated film, and each clip ranged from one to two minutes for a total of approximately 14 minutes.

The control group viewed a neutral montage of clips from seven animated films that did not contain any appearance-related messages (e.g., Dora the Explorer, Clifford, Dragon Tales, Lilo & Stitch, Care Bears; see Appendix C for complete list). Each clip

contained animation of a human figure; however, unlike the humans depicted in the experimental clips, these humans were often secondary rather than primary characters. Two clips were selected from each film for a total of approximately 14 minutes. These clips were viewed and rated by children in a pilot study to ensure that they were comparable to the experimental video clips in interest and familiarity.

Behavioral rating scale. A behavioral rating scale was created and used to identify children's appearance-related behaviors after being exposed to the video clips (see Appendix D). This method was employed to supplement additional assessments that have been reported to be less reliable for use with young children (e.g., body dissatisfaction measures). The rating scale included items such as type of costume chosen and time spent in the costume, time spent playing at the vanity, time spent playing in the kitchen, etc. Two undergraduate research assistants were trained by the researcher to code the observations. Raters noted the start and stop times of each activity in which a child engaged, and a 15 second interval was used to gain a frequency count of appearance-related and nonappearance-related behaviors. They were not blind to condition given that their observation room connected to the playroom and the room in which children were exposed to the different film clips. However, this should not be viewed as a limitation as the number of activities in which a child could engage was finite and each activity was clearly defined a priori as appearance-related or nonappearance-related. Research assistants viewed participants with the researcher during pilot testing. Definitions of appearance-related and nonappearance-related play were specified and discussed during this time. Interrater reliability was established over the course of training. Methods suggested by Cohen (1960) were employed to correct for chance agreement between the

raters. In several cases, participants engaged exclusively in a single type of play, violating the conditions necessary to calculate an accurate kappa statistic. For the remaining participants, Cohen's kappa ranged from .76 to 1.0, with an average of .92.

Child interview. A semi-structured interview (see Appendix E) was conducted before and after video exposure to assess any pretest group differences and between-group effects. A trained interviewer asked the children questions about their appearance satisfaction (e.g., "Do you like the way you look?"). A visual scale with three markers to illustrate response options (never or almost never, sometimes, and nearly all the time) was used to help children answer each question. Response options were coded numerically to allow for quantitative analyses. Other appearance-related questions also were asked (e.g., "Who do you look like the most?," "Could you be a princess?," "What would you have to change to become a princess?"). Verbal reinforcement was provided throughout the interview for answering questions regardless of the content of responses. Additionally, children were shown images of three girls and three women dressed as princesses. The images varied by weight but not height or any other characteristic. Children were asked to select the child or woman they believed to be the "real" princess. The choices were coded numerically to allow for quantitative analysis. Children also were asked to explain their choice. The primary researcher and a research assistant categorized responses as appearance-related nonappearance-related and weight-related or nonweight-related. In the event of a discrepancy, the researcher and assistant discussed the response and their rationale for coding with an objective member of their research team until agreement was reached. Within each category (appearance-related response or nonappearance-related response), specific responses were given numerical values in order

to examine response frequencies. Given that the coding system was not complex or subjective (i.e., each response was assigned a numerical value in order to run frequency analyses), all responses were coded by the primary researcher. It is important to note that the interview was amended several times over the course of data collection. Amendments only took the form of question addition used for clarification purposes.

Body dissatisfaction. Child figures were created using a computer software program that allowed for the manipulation of physical size and skin color. Digital photographs of the participants' faces were added to the bodies of the computer-generated figures. Face and body color were matched for each participant. Body dissatisfaction was measured using personalized figures to potentially compensate for the limitations of generic figure rating scales that present a developmental challenge to younger children because they require them to think of the figure as a representation of themselves. Additionally, generic figure rating scales often fail to account for racial differences (see Gardner, 2001). During pilot testing, children manipulated the size of a single figure using a computer mouse. The majority of pilot participants extended the body to an extreme size but reported that they did not think the figure actually looked like them. Given the trend for young children to morph the body shape to the largest or smallest extreme despite instruction to stop once the figure looked like them or how they would like to look, an alternative method of assessment was utilized during data collection. Each participant was presented two figures at a time on a 15.4" computer screen and asked to choose the figure that looked most like her. Children were presented with the figure they chose and another figure until the same figure was chosen twice. The process was then repeated, but the interviewer asked, "Which one do you want to look

like the most?" The order of initial figure presentation was consistent throughout the study. Presented figures became thinner or heavier depending upon the participant's initial choice. Body image was calculated by subtracting the figure chosen as the perceived current size from the figure chosen as the ideal size. A negative score indicates a desire for a thinner size, a positive score indicates a desire for a heavier size, and a score of zero indicates contentment with one's body size.

Parent Measures. Parents completed a demographic questionnaire including items about their child's time spent watching television, favorite show or movie, favorite character, etc. (see Appendix F). It is important to note that the original wording of the questions related to television viewing did not allow for their inclusion in the analyses. The original question asked parents to choose a predetermined range of hours children watched television per day; however, the ranges provided were grouped according to weekly categories (i.e., 0-5; 5-10; 10-15, etc.) rather than daily categories. All parents were contacted prior to data analysis to inquire about the total number of hours their child spends watching television per week, and approximately half responded. The mean number of hours per week spent watching television was comparable to other studies (e.g., Liebert & Sprafkin, 1988), and a wide range of responses was reported (3 hours to 47.5 hours per week); therefore, it is believed that the respondents were representative of the entire sample.

The parent section of the "*What's Your Body Image*?" questionnaire (Kearney-Cooke & Striegel-Moore, 1989; see Appendix G) was administered to assess parents' opinions of their children's physical appearance, eating habits, exercise routines, and actions taken to alter their children's appearance. BMI for each parent and child was

calculated based upon heights and weights provided by mothers. Parent BMI was calculated in the typical fashion (weight (lb) / [height (in)]^2 x 703). For children, weight percentiles were calculated and used to classify each child's weight category according to standards set forth by the Center for Disease Control (http://www.cdc.gov/nccdphp/dnpa/bmi/childrens_BMI/about_childrens_BMI.htm).

The Appearance Schema Inventory (ASI; Cash & Labarge, 1996) is a 14-item self-report measure that utilizes a 5-point Likert scale. It provides information about mothers' beliefs about the cognitive significance of personal appearance in their own lives (e.g., what I look like is an important part of who I am; see Appendix H). Cronbach's alpha has been reported as .84.

The Trait subscale of the *Physical Appearance State and Trait Anxiety Scale* (PASTAS; Reed, Thompson, Brannick, & Sacco, 1991) was used to assess mothers' trait body image anxiety, weight- (e.g., thighs) and non-weight-related (e.g., lips). The PASTAS is a self-report measure that utilizes a 5-point Likert scale. Cronbach's alphas for both weight and non-weight scales ranged from .82 to .92, and test-retest reliability has been found to be .82 (see Appendix I).

Procedure

Children were assigned randomly to the experimental or control condition (see Table 1 for the distribution of ages within each condition). Informed consent was obtained from each participating parent, and assent was obtained from each child. With parental permission, a digital headshot was taken of each child participant upon arrival. While their children participated in the experiment, parents completed a survey packet

and participated in a brief interview related to child and family eating behavior for a related study.

Each child was accompanied to a room with a couch, television, and mirror by one of three trained female research assistants who acted as the child's playmate. The research assistant "playmates" all had previous experience working with children (e.g., extensive child care background, early education internship) and were trained carefully regarding their role in interacting with the participants. Each playmate was Caucasian, slender, and in her early 20s. All playmates wore casual, appropriate clothing typical of what one might wear to baby-sit (i.e., solid colored shirts or sweaters and jeans).

After several minutes of chatting to build rapport, each participant was asked to stand in front of the mirror and answer questions related to physical appearance. Given the developmental limitations related to interviewing young children, the girls were asked to look at their reflection in the mirror and think of themselves when they answered. Participants then were shown two pictures of themselves on a computer screen with two different body sizes, and they were asked to pick the picture that looked most like them. Depending on the size of the figure chosen, another figure that was either slightly thinner or heavier was shown on the screen and the picture not chosen was removed. A forced choice was imposed until the same figure was chosen twice or the most extreme (thinnest or heaviest) figure was chosen. This process was repeated to obtain an ideal figure rating. It is important to note that a pretest figure rating was obtained for approximately half of the sample. Pictures were taken upon entrance to the interview room for the first half of participants, while pictures were taken upon arrival for the last half of participants. The

extra time resulting from taking pictures upon arrival afforded the opportunity to collect pretest body dissatisfaction ratings.

Participants were then shown a series of three child and three adult figures of varying weights dressed as princesses. The adult and child princesses were presented as Caucasian with blond hair and brown eyes. Child princesses wore a pink ballerina outfit and adult princesses wore a sleeveless pink gown. Computer software allowed for the manipulation of proportional weight changes while keeping height stable. Participants were told that, although each figure looked the same, only one was a "real princess" and that they were to identify the "real" one. The research assistant playmates then asked each child to explain their choice.

After completion of all pretest interview questions and measures, girls in the experimental condition viewed clips featuring animated characters from films containing appearance-related messages (e.g., Beauty and the Beast), whereas girls in the control condition viewed clips featuring animated human characters from television shows and movies that were not appearance-focused (e.g., Dora the Explorer). The playmate encouraged the child participants to pay attention to the "movie" and reinforced attentive behavior.

After viewing the video clips, each participant was taken to a playroom next door in which children's music was played softly to create a more comfortable and inviting environment. The playroom contained different play stations including a dress-up rack consisting of costumes similar to those worn by characters featured in the experimental video clips as well as costumes that were unrelated to the clips (e.g., fireman, doctor). The playroom also contained a vanity (including brush, "play" make-up, hair accessories,

etc.), blocks and legos, dinosaurs, a dollhouse, and a kitchen set. Free play was observed for 8-15 minutes. Variance in playtime was largely due to the individual child's interest and participation. Given attentional limitations in young children, play time was advanced when it became evident that a child was becoming disinterested or unfocused. Although the playmate accompanied the child to the playroom, she did not initiate any particular play activities. She joined the child in an activity only if she was invited, and she refrained from directing the child or reinforcing any particular play activity. Children were asked to complete a five-minute color-a-person activity for a related study prior to leaving the playroom. The activity required children to color their favorite and least favorite parts of their body on two separate child figure silhouettes. After playing and completing the five-minute activity, each participant was accompanied back to the other room where the pretest interview and measures were administered again at posttest.

After completion of a survey packet and an interview for a related study, parents were debriefed (Appendix J), offered the opportunity to schedule an appointment for a brief assessment of the child's general strengths and weaknesses in intellectual functioning, and reunited with their child.

RESULTS

All variables were screened for skewness, kurtosis, outliers, and homogeneity of variance using Levene's test. There were only two variables for which both nonnormality of distribution and unequal variance were a problem, suggesting that the majority of variables experienced no major violations in statistical assumptions underlying the parametric statistics used (Keppel & Zedeck, 1989). Violations of normality were observed for analyses on body dissatisfaction (ideal size minus perceived current size) at pretest (significant Levene's test, $p = .020$; negatively skewed, $z = -4.07$, and positively kurtotic, $z = 3.60$) and posttest (significant Levene's test, $p = .024$; negatively skew, $z = -2.07$). Analyses using girls' choices for identified child princess at pretest also violated the assumptions of normality (significant Levene's test, $p = .019$; and negatively kurtotic, $z = -2.30$). Attempts to correct these violations were unsuccessful using square-root and logarithmic transformations. Therefore, these variables remained untransformed. Participants with missing data were excluded from analyses on a case-by-case basis.

Based on independent t-tests and chi-square analyses, there were no significant differences between the experimental and control groups in demographics, weight classification category, television viewing, or number of Disney DVDs owned (see Table 2).

Self-report of appearance-related concerns: The child interview

Pretest interviews revealed that all but one participant liked the way she looked; however, when asked if there was anything they disliked, close to half the sample spontaneously provided a response (24.6% [$n = 16$] of all participants indicated that they

disliked something about their physical appearance [e.g., hair, skin color, body part], 10.8% [*n* = 7] revealed that they were dissatisfied with their clothing, and 1.5% [*n* = 1] disliked something about herself that was non-appearance related). In response to being asked "If you could change anything about the way you look, what would it be?," 32.3% (*n* = 21) of girls noted that they would change something about their physical appearance (of those responders, 57.1% [*n* = 12] would change their hair, 30.8% [*n* = 7] would change their skin color, 15.4% would make their legs skinnier [*n* = 2]), 22.4% [*n* = 15] would alter their clothing or accessories, 14.9% [*n* = 9] would change into a princess character, 3.0% [*n* = 2] would look more like a female friend or family member, and 1.5% [*n* = 1] would change something non-appearance related). Approximately 27% (*n* = 17) of participants would not change anything about the way they look, were non-responsive, or responded by saying "I don't know."

More than half of participants indicated that they worry about being fat sometimes (21.5%, *n* = 14) or almost always (33.8%, n = 22). Comparable endorsements were observed in all girls regardless of age ($\chi^2(6) = 3.12$, $p = .793$) and weight classification category ($\chi^2(6) = 8.34$, $p = .214$). To further explore children's thoughts about fatness, several participants were asked to express their thoughts about being fat, and responses ranged from "being fat is bad" to "my mommy thinks she's fat." Additional example responses included, "I don't want to be fat because I don't like it," "I want a baby in my tummy so it's bigger…my mom just had a baby," and "mom don't want to be fat." With regard to teasing, almost half of participants indicated that they have been teased about being fat (48%; *n* = 32). The majority of girls did not identify teasing perpetrators;

however, several girls spontaneously identified friends (9%; $n = 6$), siblings (6%; $n = 4$), and parents (6%; $n = 4$).

The vast majority of girls believed that they could be a princess regardless of their weight ($\chi^2(3) = 2.40$, $p = .494$) and age ($\chi^2(3) = 1.96$, $p = .580$). The majority of girls indicated that something non-appearance related (e.g., have a queen for a mom; 29.2%, $n = 19$) or their clothing or accessories (e.g., have a pretty dress or a crown; 38.5%, $n = 25$) would make them a princess. Approximately 8% ($n = 5$) endorsed needing to change their hair or skin color to become a princess. Example responses included "my hair would have to grow long," "I'd need yellow hair," "I'd paint myself white," and "I would change from brown skin to white skin."

Overall, results were largely comparable at posttest regardless of assigned condition, age, or weight category. At posttest, however, more girls (24.6%) indicated that they would look like a princess if they could change anything about their appearance. A larger percentage of girls were also nonresponsive, replied with "I don't know," or indicated that they would not change anything (32.3%). Consequently, fewer girls reported that they would alter their physical appearance (23.1%), clothing or accessories (12.3%), or change to look more like a family member or friend (7.7%). Differences in frequency of concerns about weight are described below.

Effect of appearance-related media on play behavior

A 2 x 4 univariate analysis of variance (ANOVA; condition x age) was conducted to determine if girls exposed to appearance-related children's media would be more likely to engage in appearance-related play activities than control group participants. Although no a priori hypotheses were made about age, it was included as an independent variable

to explore any potential developmental differences. Results of the ANOVA suggested that the manipulation failed to produce significant between-group differences for condition, $F(1, 50) = .511$, $p = .478$, or age, $F(3, 50) = .380$, $p = .768$. The interaction between condition and age also was non-significant, $F(3, 50) = .350$, $p = .788$. Means and standard deviations are presented in Table 3.

Effect of appearance-related media on young girls' body image

Posttest analysis. A 2 x 4 multivariate analysis of variance (MANOVA; condition x age) was conducted to assess any post-exposure body dissatisfaction differences between groups. Results of the MANOVA did not reveal a main effect of condition, $F(2, 44) = .762$, $p = .473$, or an interaction of condition and age, $F(6, 88) = .738$, $p = .620$. Although results of the MANOVA did not indicate a significant main effect of age, $F(6, 88) = 2.10$, $p = .061$, a trend toward significance was observed. Univariate analyses were interpreted in light of this trend (see Table 4). Overall, 3-year-olds were more likely to select a larger figure for their perceived current size compared to 4- and 5-years-olds. No differences were observed between the other age groups. With regard to ideal size selection, 5-year-olds selected a significantly smaller figure compared to 3-year-olds. Ideal size selection did not vary between the other age groups. Body dissatisfaction (discrepancy between ideal and perceived current size) at posttest did not significantly differ between the age groups. Means and standard deviations are presented in Table 5.

Repeated measures analysis. Repeated measures ANOVAs were conducted to further evaluate the effects of exposure to appearance-related media on young girls' body image. Body image ratings at pretest and posttest ($n = 29$) were examined as a function of condition and age. Pretest data were obtained from the last half of participants after a

change in methodology described previously. With regard to perceived size, results failed to reveal any significant main effects for time (pretest vs. posttest) as a function of condition, $F(1, 23) = 1.57$, $p = .223$, age, $F(2, 23) = 1.45$, $p = .255$, or an interaction of condition and age, $F(2, 23) = 0.20$, $p = .824$. Results of a repeated measures ANOVA examining the effect of exposure on ideal figure over time failed to reveal any significant main effects of condition, $F(1, 23) = 2.46$, $p = .130$, or age, $F(2, 23) = 0.99$, $p = .387$. Further, no interaction was revealed, $F(2, 23) = 1.61$, $p = .622$.

Body dissatisfaction (ideal rating minus perceived rating) also was assessed using repeated measures ANOVA. Results failed to reveal any significant main effects of time as a function of condition, $F(1, 23) = 0.36$, $p = .555$, age, $F(2, 23) = 1.97$, $p = .162$, or an interaction of condition and age, $F(2, 23) = 0.35$, $p = .966$.

Effects of maternal body image on girls' play behavior and body image

Maternal body image. The relationship between maternal and child pretest and posttest measures of body image were examined using multiple regression analyses. Results indicated that maternal reports of anxiety about weight- and nonweight-related features and importance placed on physical appearance failed to account for any variance in child body dissatisfaction, ideal body size, perceived body size, or frequency of weight concerns.

Effects of appearance-related teasing and praise on girls' body image

Stepwise multiple regression correlation coefficients were calculated to determine the relationship between child body dissatisfaction and weight concerns and frequency of experience with familial (mother, father, sibling, grandparent) appearance-related teasing and praise. Condition was included as an additional independent variable to also consider

any effect of exposure to appearance-related media. Only sibling teasing, $F(1, 49) = 4.70$, $p = .035$, was retained as a significant predictor of girls' posttest frequency of weight concerns accounting for approximately 7% of the variance. Results indicated that more frequent appearance-related teasing was associated with more frequent self-reported weight concerns.

Exploratory analyses

Effect of appearance-related media on girls' concerns about weight: Posttest analysis. A 2 x4 univariate ANOVA was conducted to assess any differences in the reported frequency of weight worries experienced by participants. Results failed to reveal main effects of condition, $F(3, 44) = .66$, $p = .579$, age, $F(1, 44) = .12$, $p = .727$, or an interaction of condition and age, $F(3, 44) = .27$, $p = .846$. About half of girls reported that they never worry about being fat (50.8%, $n = 33$), whereas 21.5% ($n = 14$) reported that they worry sometimes and 13.8% ($n = 9$) reported worrying almost always. Several girls were not responsive when queried at posttest (13.8%, $n = 9$).

Effect of appearance-related media on girls' concerns about weight: Repeated measures analysis. Repeated measures ANOVAs were conducted to further evaluate the effects of exposure to appearance-related media on young girls' weight concerns. Self-reported frequency of weight concerns at pretest and posttest ($n = 52$) were examined as a function of condition and age. Several participants were not included in the current analysis because data were not obtained at pretest and posttest (e.g., the child refused to respond at pretest or posttest). Results failed to reveal any significant main effects for time (pretest vs. posttest) as a function of condition, $F(1, 44) = 0.49$, $p = .825$, age, $F(3, 44) = 0.41$, $p = .746$, or an interaction of condition and age, $F(3, 44) = 1.49$, $p = .232$.

However, a general effect of time (pretest to posttest) was revealed, $F(1, 44) = 11.40$, $p = .002$. This effect indicated that self-reported frequency of fat worry across all participants decreased significantly from pretest ($M = 2.00$, $SD = 0.89$) to posttest ($M = 1.52$, $SD = 0.73$).

Media exposure posttest correlates. Pearson correlation coefficients were calculated to examine relationships between girls' weekly television consumption (parent reported) and number of Disney DVDs owned with their body dissatisfaction and weight concerns. Overall, thinner perceived current sizes ($r = -.402$, $p = .017$, $n = 35$) and less body dissatisfaction ($r = .344$, $p = .043$, $n = 35$) were associated with the larger quantities of Disney DVDs. Results indicated that the total number of hours spent watching television per week ($r = .691$, $p = .004$, $n = 15$) was positively related to the number of Disney DVDs they owned. The number of reported hours girls spent watching television was unrelated to any measure of child body image, however. With regard to girls' weight, lower BMI percentiles were associated with greater numbers of Disney DVDs ($r = -.350$, $p = .042$, $n = 34$). BMI was unrelated to television viewing.

Effect of appearance-related media on girls' perceptions of princesses: Pretest princess identification. Pretest frequency analyses revealed that the majority of responding participants (43.1%; $n = 28$) identified the thinnest figure as the "real" child princess. A similar number of participants chose the average size figure (24.6%; $n = 16$) and heaviest figure (23.1%; $n = 15$), whereas 9.2% ($n = 6$) refused to choose. A one-way ANOVA revealed a significant main effect of age, $F(3, 54) = 2.80$, $p = .049$. Follow-up LSD post-hoc analyses indicated that 3- and 4-year-olds chose significantly larger figures for the "real" child princess compared to 6-year-olds. Five-year-olds did not vary

significantly from the other age groups. Means and standard deviations are presented in Table 6. Reasons for figure identification were examined using a one-way ANOVA, which revealed a main effect of age, $F(3, 51) = 6.72$, $p = .001$. Follow-up LSD post-hoc analyses indicated that 6-year-olds were more likely than younger children to provide weight-related reasons for their selections.

With regard to the identification of the "real" adult princess, pretest frequency analyses indicated that a comparable number of participants chose each figure (thinnest [32.3%, $n = 21$]; average [30.8%, $n = 20$]; heaviest [29.2%; $n = 19$]). A one-way ANOVA revealed a trend ($F(3, 55) = 2.12$, $p = .109$) for a main effect of age, and LSD post-hoc analyses indicated that six-year-old girls tended to identify a thinner "real" adult princess than three-year old girls (see Table 6). A one-way ANOVA revealed that the reasons girls provided for their choice differed between the age groups, $F(3, 51) = 7.25$, $p < .001$. As with the child princess responses, LSD post-hoc analyses revealed that 3-year-olds were least likely to provide weight-related reasons for their selection, whereas 6-year-olds were most likely.

Repeated measures analysis. A repeated measures ANOVA was conducted to assess the effects of appearance-related media exposure on girls' choice of "real" princess. Results indicated that the selection of the "real" child princess did not vary over time as a function of condition, $F(1, 47) = .10$, $p = .752$, age, $F(3, 47) = 0.87$, $p = .465$, or an interaction of condition and age, $F(3, 47) = 1.11$, $p = .356$. With regard to identification of the "real" adult princess, ratings varied over time as a function of an interaction between condition and age, $F(3, 46) = 4.71$, $p = .006$ (see Figure 1; see Table 7 for means and standard deviations).

DISCUSSION

Recent literature suggests animated children's media contains a surprising number of appearance-related messages. As a result of such findings, the aim of the current study was to investigate what impact exposure to this type of media may have on very young girls' body image. The current experimental study was the first to test the effects of exposure to appearance-related animated media (e.g., clips from Beauty and the Beast) with girls as young as 3-years-old. Results failed to reveal any direct negative effects of appearance-related media exposure on very young girls' body image. These results are in contrast to what was hypothesized; however, they are consistent with several cross-sectional studies that also have reported that media exposure does not affect body dissatisfaction in girls younger than 6-years-old (e.g., Dohnt & Tiggemann, 2004, 2005). Body image was assessed in three ways: body dissatisfaction scores (discrepancy between ideal and perceived current size), behavioral observations, and interviews. Additionally, the study explored other correlates that might contribute to girls' body dissatisfaction.

Body Dissatisfaction. Overall, results indicated that exposure to appearance-related media did not affect participant body dissatisfaction ratings. Body dissatisfaction was assessed using actual pictures of participants' faces, which were realistically attached to computer-generated figures. Figures were personalized in consideration of developmental concerns (e.g., children are expected to understand the figure outline acts as a representation of their own body) and psychometric limitations (i.e., not reliable for use with children younger than 8-years-old [see Gardner, 2001]) associated with generic figure rating scales. It was hoped that the personalization of the figures would increase

the girls' immersion in the task and their identification with the figure. Although not statistically significant, it may be of clinical interest to note that approximately a quarter (24.6%) of all participants and close to half (47.6%) of 3-year-olds desired a thinner ideal figure compared to their current perceived size. This trend may be of particular interest in light of the work by Davison and colleagues (2003) which suggests weight concerns at younger ages are predictive of disturbed eating behavior at older ages. However, despite the personalization of the dissatisfaction measure, current body dissatisfaction results echo the null findings of many studies using generic figure rating scales with young participants (e.g., Dohnt & Tiggemann, 2004, 2005).

Behavioral Observations. Although it was hypothesized that exposure to appearance-related media would result in more appearance-related play activity, results failed to reveal any differences between the exposure conditions. In fact, a wide range of play behaviors were observed within each group, with some children engaging exclusively in appearance- or nonappearance-related play activities. Given the wide range of play behaviors observed from all children, the choices for play were unrelated to exposure to appearance-related media. It is possible that girls chose play activities that were similar to those they normally engage in and, thus, most comfortable in the artificial environment. Other participants may have played with novel toys that they do not regularly encounter in their home setting.

Interview. In general, results suggested that girls' were satisfied with their appearance and that the vast majority of participants believed that they could be a princess. However, close to a third of girls at pretest and a quarter of girls at posttest indicated that they would, if possible, change something about their physical appearance

(e.g., hair, skin color, or weight). Additionally, close to half of participants at pretest reported worrying about their weight sometimes or almost all the time. Surprisingly, a mean decrease in the frequency of weight concerns was observed in each condition and age group. The reason for the decline in frequency of reported weight concern is unclear, but there are at least two possibilities to consider. First, interview data obtained from young children has been cited as being unreliable (see Gardner, 2001). It is possible that the change observed was due to the unreliable nature of child responses; however, if reliability was the only issue we would likely have observed increases and decreases in the frequency of worries rather than a stable change across age groups within each condition. It is important to remember that although the control group was not exposed directly to appearance-related media, both groups spent time in a playroom that included many appearance-related toys (e.g., princess costumes, vanity set). Additionally, both groups of girls were inundated with discussion about appearance via interview questions and the administration of more objective measures of body image and weight preference – including two measures focused exclusively on princesses. Gilbert (1998) reported observed increases in confidence in children who had imitated their favorite star or character. It is possible that engagement in appearance-related discussions, in part about princesses, and exposure to appearance-related toys actually enhanced girls' confidence and subsequently reduced, at least temporarily, their weight concerns. Specifically, the stimuli to which children were exposed may have been potent enough to create a fairytale-like environment in which girls adopted the personas of princesses. The adoption of such personas then may have resulted in their concerns about their actual appearance.

Perceptions of Princesses. Girls' perceptions of what a "real" princess looks like suggested that girls typically conceptualize princesses as thin. However, 6-year-olds were most likely to choose the thinnest figures as the "real" princess. It is possible that 6-year-olds are able to more accurately choose the size illustrated most frequently in appearance-related animations (i.e., the thinnest princess). This might be related to the fact that 6-year-olds likely have had more exposure to this type of media. The age discrepancies, however, may reflect spurious findings secondary to uneven cell sizes and small samples, and therefore should be interpreted with caution.

Parental Relationships. Examination of the effects of maternal body image on participant body dissatisfaction failed to reveal any significant effects. Additionally, parental teasing was unrelated to girls' ratings and reports. In contrast, sibling teasing was associated with more frequent self-reported posttest weight concerns. This association may be of particular interest given that, on average, the frequency of weight concerns decreased across all participant groups. Having a critical sibling may be a risk factor for weight concerns that warrants additional investigation. Some researchers have focused on parental appearance-related teasing and its association with more negative child body image (e.g., Phares et al., 2004); however, sibling influences have been studied less often with children. The current finding suggests a need for more investigation about the relationship between sibling commentary and young children's body dissatisfaction and weight concerns.

Television Viewing. The number of Disney DVDs owned was correlated with thinner current size selections and less body dissatisfaction, as measured by the discrepancy between ideal and current size. This finding was, again, in contrast to what

we anticipated based on the impact of media exposure on adolescent and adult body image (see Thompson et al., 1999). However, it is consistent with our finding that exposure to appearance-related stimuli (e.g., toys, princess pictures) was associated with a decrease in the reported frequency of weight concerns. Collectively, these findings indicate that media exposure, specifically appearance-related media, for girls may be associated with fewer or less intense weight and shape concerns. This may be due in part to a developmental phenomenon associated with young children's potential inability to like an attractive person or character without engaging in some form of imitation or personal identification with that individual (e.g., if a child likes Belle, she may pretend to be Belle rather than engaging in a social comparison between herself and Belle). The adoption of a persona may, at least temporarily, protect the child's body esteem. Interestingly, lower BMI was associated with greater numbers of Disney DVDs owned. Future research should seek to investigate the relationship between young children's appearance-related media consumption and BMI. Specifically, researchers should seek to determine if BMI varies by type of media consumed most frequently (e.g., video games, nonappearance-related media, appearance-related media). Although the number of Disney DVDs was associated positively with weekly television viewing, the number of hours spent watching television per week was unrelated to all measures of participant body image and BMI. The range of hours spent watching television was comparable to other studies, so it is possible that this finding may be reflective of insufficient power secondary to a low sample of participants who provided television viewing estimates.

Limitations and Future Directions

Limitations of the current study should be considered when evaluating the results. First, the sample size was quite small, especially for 5- and 6-year-olds. Given that the current sample size did not meet criteria to ensure adequate power (Cohen, 1992), null findings may be a result of too few participants rather than a lack of between-group differences. Dittmar and colleagues (2006) report a greater sample size in their work exploring the impact of exposure to Barbie images. Their methodology yielded significant results based upon parametric tests, but results were only significant for children older than 5.5-years-old. The current results are commensurate with all previous cross-sectional studies evaluating the effects of media exposure on young children. Therefore, it is plausible that results would be null even with a larger sample size.

The relative brevity of exposure should be considered as another limitation of the current study. The experimental group was exposed to a total of 14 minutes of clips that ranged from 1 to 3 minutes each. This exposure may have been inadequate given that children are saturated with this type of media on a regular basis (the average child in the current study watched approximately 11 hours of television per week and owned 22 Disney DVDs). Future studies may wish to explore in greater detail children's everyday exposure to appearance-related media rather than relying on longer periods of exposure given potential concerns related to young children's attention span. A third limitation of the current study is that all participants were exposed to appearance-related play stimuli, princess images, and appearance-related questions prior to exposure. As a result, it was not possible to isolate the effects of exposure to appearance-related media. In future studies it will be important to avoid or limit control group exposure to appearance-related

stimuli prior to posttest assessments. An assessment only, posttest design may be beneficial to help further isolate the effects of media exposure.

The demographic make-up of the current sample should be considered as a fourth limitation. Although the current sample was more ethnically and racially diverse than typically reported in other studies (e.g., Dittmar et al., [2006] and Dohnt & Tiggemann [2005] reported that more than 90% of their participants were Caucasian), the small sample size did not allow for examination of differences between the various groups. Future studies should attempt to recruit greater numbers of participants from varying ethnic/racial backgrounds to allow for analyses based upon this variable. It may be of particular interest given that the majority of animated princess characters are portrayed, almost exclusively, as Caucasian women. Additionally, the sample was composed primarily of participants with parents who were well-educated and whose socioeconomic status likely fell within the middle- to upper-class (e.g., university professors, lawyers, students, etc.). The mean age of mothers was approximately 36-years-old. Given that parents were, on average, highly educated, of at least middle-class status, and in their mid-to late-30s, replication with a more heterogeneous sample would increase the generalizabiltiy of the current findings to a broader population. This is especially important in light of literature that suggests body dissatisfaction may vary by socioeconomic status (e.g., Gardner, Friedman, & Jackson, 1999; Wang, Nuala, & Kenardy, 2005). Additionally, it is possible that parent-child interactions regarding physical appearance are affected by factors such as socioeconomic status.

Finally, the current measure of body dissatisfaction has not been standardized with a large, heterogeneous sample. Future studies should seek to determine test-retest

reliability with younger and older children. In particular, researchers should seek larger samples of children to determine if the personalization of the body dissatisfaction assessment instrument yields adequate reliability estimates with young children unlike more generic figure rating scales.

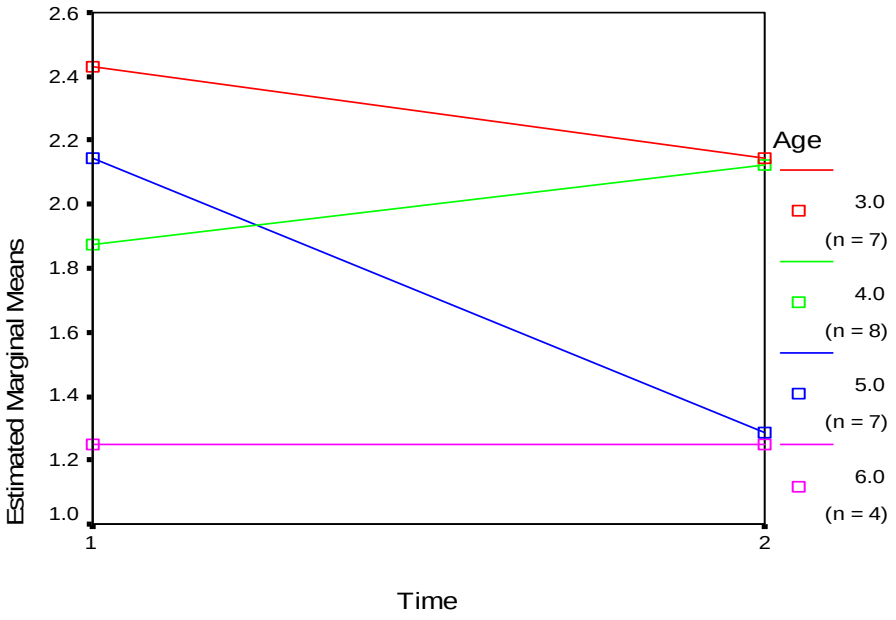
Conclusions

Collectively, results of this study and other children's media studies suggest strongly that developmental considerations must be made when defining and investigating body image in children. Based upon extant literature, subtle shifts in cognition may occur around what appears to be the critical age of six-years-old. These changes might contribute to a movement from identification with favorite media figures to an inappropriate comparison with them. This was the first study to explore experimentally the relationship between media exposure and body dissatisfaction in preschool-age children. Despite objective evidence that indicates children's media contains many appearance-related messages that may affect body dissatisfaction, young children may not be affected or may actually experience some benefits, at least in the short-term, such as decreases in reported weight worries. This may be because, at younger ages, children frequently engage in pretend play (thus, adopting the role of the character) and may not be capable of making subtle social comparisons. However, as children become older and more cognitively savvy, they engage less in pretend play and as a result may stop identifying themselves as the characters they idolize. At this time, they likely begin to recognize the differences between themselves and their favorite characters – including appearance-related differences – just as they do with their peers. However, to date, it is unknown if early exposure to the thin ideal has any effect on future

body image concerns or satisfaction. Longitudinal data are needed to determine the long-term effects of early exposure to media that illustrates the thin ideal and conveys beauty messages and ideals that are often associated with body dissatisfaction and disturbed eating behavior in much older populations.

APPENDIX A.1: FIGURES AND TABLES

Control Group



Experimental Group

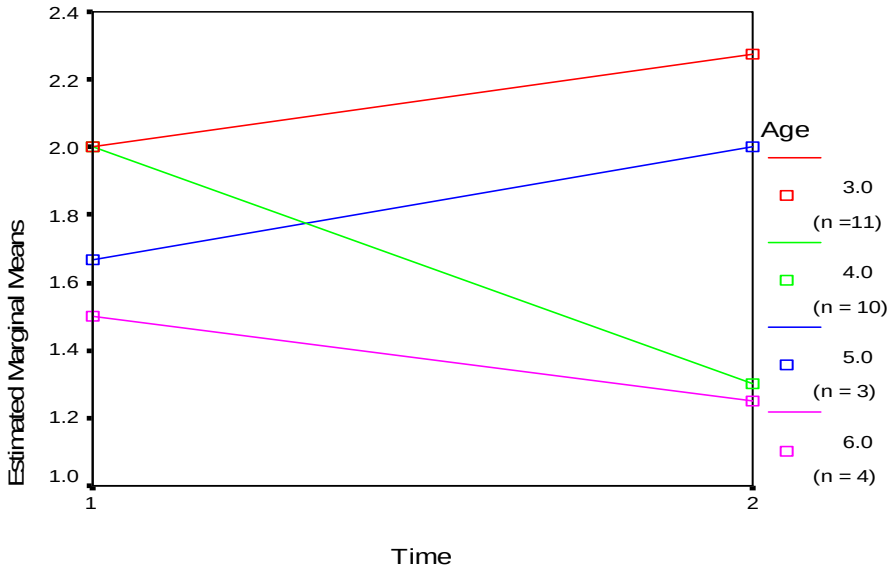


Figure 1. Mean ratings of identified adult princess as a function of condition and age.

Table 1. Age distribution within each condition.

	3-year-olds	4-year-olds	5-year-olds	6-year-olds
Control (n = 32)	10	10	8	4
Experimental (n = 30)	11	10	4	5

Table 2. Participant demographic information.

	Control	Experimental	Significance Test	*p* Value
Age (*n* = 61)	4.19 (1.05)	4.10 (1.09)	*t*(59) = .341	.734
BMI Percentile Rank (*n* = 49)	57.96 (34.43)	61.52 (36.33)	*t*(47) = -.352	.726
Ethnicity (*n* = 59)			χ^2 (4) = 5.33	.255
Total TV time/week[a] (*n* = 28)	13.50 (11.73)	9.44 (6.18)	*t*(26) = 1.19	. 246
Disney DVDs owned (*n* = 38)	23.03 (21.38)	21.10 (19.05)	*t*(36) = .294	.770

Note. [a] = total time in hours per week.

Table 3. Percentage of Time Spent Engaged in Appearance-Related Play.

Condition	Age				
	3-years	4-years	5-years	6-years	Combined
Control	45.20 (27.78)	47.28 (36.38)	54.56 (40.63)	39.58 (48.77)	47.57 (35.31)
Experimental	33.93 (31.39)	53.77 (39.14)	33.13 (35.25)	36.00 (35.56)	40.59 (34.41)

Table 4. Univariate ANOVAs: Effects of Age on Body Image.

		F	*df*	*p*
Age	Perceived Current Size	2.79	3, 45	.051
	Ideal Size	6.26	3, 45	.062
	Body Image Dissatisfaction[a]	2.84	3, 45	.317

Note. [a] = ideal rating – perceived current size rating

Table 5. Participant Body Image Ratings: Posttest Means and Standard Deviations.

Measure	Age	Condition		
		Control (n = 25)[a]	Experimental (n = 28)[b]	Total (n = 53)
Current Size	3-years-old	5.38 (2.00)	4.91 (2.05)	5.11 (2.05)*
	4-years-old	3.75 (1.83)	3.70 (1.25)	3.72 (1.49)*
	5-years-old	3.60 (1.14)	3.75 (0.96)	3.67 (1.00)*
	6-years-old	4.00 (0.00)	4.67 (0.58)	4.29 (0.49)
		4.28 (1.72)	4.29 (1.65)	
Ideal Size	3-years-old	5.25 (1.28)	3.91 (2.21)	4.47 (1.95)*
	4-years-old	3.75 (1.75)	4.10 (1.29)	3.94 (1.47)
	5-years-old	3.40 (0.55)	2.25 (1.50)	2.89 (1.67)*
	6-years-old	4.00 (0.00)	4.33 (1.15)	4.14 (0.69)
		4.20 (1.41)	3.79 (1.77)	

Measure	Age	Condition		
		Control	Experimental	Total
Body dissatisfaction[c]	3-years-old	-0.13 (2.03)	-1.0 (1.95)	-0.63 (1.98)
	4-years-old	0.00 (0.53)	0.40 (1.51)	0.22 (1.17)
	5-years-old	-0.20 (1.10)	-1.50 (1.91)	-0.78 (1.56)
	5-years-old	0.00 (0.00)	-0.33 (0.58)	-0.14 (0.38)
		-0.08 (1.22)	-0.50 (1.77)	

Note. * = $p < .05$. [a] = 3-year-olds ($n = 8$), 4-year-olds ($n = 8$), 5-year-olds (n = 5), 6-year-olds (n = 4), [b] = 3-year-olds ($n = 11$), 4-year-olds ($n = 10$), 5-year-olds ($n = 4$), 6-year-olds ($n = 3$), [c] = ideal rating-perceived rating

Table 6. Means and Standard Deviations of Princess Choices at Pretest and Posttest.

Princess Choice	3-year-olds	4-year-olds	5-year-olds	6-year-olds
Child				
Pretest (n = 55)	2.05 (0.85)	1.84 (0.90)	1.56 (0.73)	1.13 (0.35)*[a]
Posttest (n = 60)	2.10 (0.72)	1.63 (0.68)	1.83 (0.83)	1.33 (0.50)
Adult				
Pretest (n = 56)	2.21 (0.78)	1.89 (0.81)	2.00 (0.94)	1.38 (0.52)
Posttest (n = 57)	2.26 (0.73)	1.67 (0.84)	1.55 (0.69)	1.33 (0.50)

Note. * = $p < .05$. a = 6-years-old chose a significantly thinner figure compared to 3- and 4-year-olds

Table 7. Means and Standard Deviations of Adult Princess Choices.

Participants	Pretest	Posttest
Control (*n* = 26)		
3-year-olds (*n* = 7)	2.43 (0.79)	2.14 (0.69)
4-year-olds (*n* = 8)	1.88 (0.83)	2.13 (0.83)
5-year-olds (*n* = 7)	2.14 (0.90)	1.29 (0.49)
6-year-olds (*n* = 4)	1.25 (0.50)	1.25 (0.50)
	2.00 (0.85)	1.77 (0.76)
Experimental (*n* = 28)		
3-year-olds (*n* = 11)	2.00 (0.77)	2.27 (0.79)
4-year-olds (*n* = 10)	2.00 (0.82)	1.30 (0.67)
5-year-olds (*n* = 3)	1.67 (1.15)	2.00 (1.00)
6-year-olds (*n* = 4)	1.50 (0.58)	1.25 (0.50)
	1.89 (0.79)	1.75 (0.84)

APPENDIX A: RECRUITMENT FLYER

Attention Parents and Guardians

If your daughter is between the ages of 3 and 6, she is invited to participate in a research study being conducted at The University of Central Florida examining media effects on children. Your child will watch clips from children's movies, play, and be asked questions about physical appearance. You will be asked to complete a questionnaire packet and a brief interview while she participates.

You will be eligible to schedule a FREE brief assessment of your daughter's general intellectual strengths and weaknesses AND a feedback session as compensation for participation in the study!

Please contact us to learn more or to set up an appointment:

(407) 823-3872

or childmediastudy@yahoo.com

All information obtained, including identities, will remain completely confidential. This study has been approved by UCF's Institutional Review Board and will be conducted by Sharon Hayes, a Clinical Psychology Doctoral Student, under the supervision of Dr. Stacey Tantleff Dunn, an Associate Professor of Psychology.

APPENDIX B: HUMAN PARTICIPANT INFORMED CONSENT FORMS

You and your child are invited to be in a research study of popular animated children's media and body image. This study is being conducted by Sharon Hayes and Dr. Stacey Tantleff Dunn at the University of Central Florida. We ask that you read this document and ask any questions you may have before agreeing to be in the study.

The topics of this survey may be considered sensitive and you will be asked to provide personal information. The purpose of this study is to gain a clearer understanding of the beliefs and experiences of parents and children in areas such as physical appearance and body image. Any information that you provide will be held in strict confidence to the extent allowable by law, and utilized only for the purpose of this study. You will only place your name on the consent form and not on any of the surveys. Your information will be assigned a code number and will be stored separate from this form. Your name will not be connected to the information you provide. Only people directly involved in the study will have access to this information.

If you agree to participate in this study, we will ask you to complete a few questionnaires for a total of about 15 minutes and a brief interview lasting no longer than 45 minutes. You do not have to reply to any question you do not wish to answer. As compensation for your participation we are offering you the opportunity to schedule a brief assessment of your child's general intellectual strengths and weaknesses. This assessment will not measure your child's global or overall IQ but it will provide you with information about verbal and nonverbal strengths and weaknesses as determined by a comparison to the average scores obtained by children the same age. Please indicate your interest in scheduling an assessment and feedback session for your daughter.

Your participation is strictly voluntary, and you may discontinue participation at any time without penalty. The only foreseeable risk involved in this study is the low likelihood of psychological discomfort from disclosing personal information. You have the opportunity to ask, and to have answered, any questions you may have about this research at any point during the study. If you have such questions, you may call Sharon Hayes at (407) 823-3872 or shhayes@mail.ucf.edu, or Stacey Tantleff Dunn, Ph.D., at (407) 823–3578 or sdunn@mail.ucf.edu. If you want to talk to someone other than the researchers, you may contact Dr. Bob Dipboye, Psychology Department Chair at (407) 823-2216.

This research study has been reviewed and approved by the UCF Institutional Review Board. Questions or concerns regarding research participants' rights may be directed to the UCF IRB, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The telephone number is 407-823-2091. If you believe you have been injured during participation in this research project, you may file a claim with UCF Environmental Health & Safety, Risk and Insurance Office, P.O. Box 163500, Orlando, FL 32816-3500 (407) 823-6300. The University of Central Florida is an agency of the State of Florida for purposes of sovereign immunity and the university's and the state's liability for personal injury or property damage is extremely limited under Florida law. Accordingly, the university's and the state's ability to compensate you for any personal injury or property damage suffered during this research project is very limited.

I have read the information provided on the previous page. My questions have been answered to my satisfaction, and I voluntarily agree to participate in this study. I understand that I will receive a copy of this consent form after it is signed.

Printed Name _____ Date _____

Signature _____ Date _____

Signature of the Investigator _____

COMPENSATION INFORMATION

I am interested in scheduling a brief assessment of my daughter's general intellectual strengths and weaknesses. I understand this assessment will not measure my child's global or overall IQ but it will provide me with information about her verbal and nonverbal strengths and weaknesses as determined by a comparison to the average scores obtained by children the same age. I understand that I will be offered the opportunity to schedule an assessment and a feedback session to review the results at the conclusion of my participation today.

Printed Name _____ Date _____

Signature _____ Date _____

Signature of the Investigator _____

I am NOT interested in scheduling a brief assessment of my daughter's general intellectual strengths and weaknesses at this time. I understand that I retain my right to receive this compensation at a later time and may schedule by calling Sharon Hayes at (407) 823-3872. I understand that I will be offered the opportunity to schedule an assessment and a feedback session to review the results at the conclusion of my participation today.

Printed Name _____ Date _____

Signature _____ Date _____

Signature of the Investigator _____

Human Participants Parental Informed Consent Form

You and your child are invited to be in a research study of popular animated children's media and body image. This study is being conducted by Sharon Hayes and Dr. Stacey Tantleff Dunn at the University of Central Florida. We ask that you read this document and ask any questions you may have before agreeing to be in the study. If you choose to participate, please know that you may withdraw your consent for participation at any time without penalty.

Dear Parent/Guardian:

I am a graduate student at the University of Central Florida under the supervision of Dr. Stacey Tantleff Dunn conducting research on children and body image. The purpose of this study is to evaluate the effects of popular children's media on children's body image and play behavior. The results of the study may help researchers, parents, and teachers better understand the relationship between exposure to appearance-related media and the way children feel about their own appearance. These results may not directly help your child today, but may prove to be beneficial in the future.

Your child will be asked questions about their favorite animated television shows and characters. They will have a digital photograph taken of their face in order to personalize a computer-animated child figure that will help them to identify how they think they look and what they would like to look like. This photograph will be deleted immediately after your child has completed this part of the study. If for any reason you do not want your child's photograph taken, he or she may still participate in the study. Please indicate your preference at the end of this form.

Half of the participating children will either watch clips from popular animated films and television shows containing appearance-related messages such as Cinderella, while the other children watch clips from popular animated films and television shows containing no or minimal appearance-related messages such as Lilo and Stitch. Your child will be escorted to a playroom and allowed to play with various toys, dress-up clothes, coloring books, etc. She will be accompanied by an undergraduate "playmate" that will supervise and play with your child. Children will then be asked several questions about how they feel about their appearance, but they will not have to respond to any question they do not wish to answer. A research assistant will be present with your child at all times. The total amount of time to complete the study will be approximately 1 hour.

With your permission, your child will be videotaped during his or her time spent in the playroom. The video will be accessible only to the research team for observational purposes. At

the end of the study, the tape will be erased unless you provide written permission (see next consent form) to allow the researcher to retain the tape for future research and/or educational purposes. Although the children will be asked their names, their identity will be kept confidential to the extent provided by law. We will replace their names with code numbers. Results will only be reported in the form of group data. All published information will not contain any identifying information or individual results.

You and your child have the right to withdraw consent for your child's participation at any time without consequence. There are no known immediate benefits to the participants. Effects of such brief exposure to appearance-related media are expected to have subtle short-term effects. However, in the event that a child becomes upset by any part of the study, his or her participation immediately will be discontinued without penalty. In the unlikely event that a child is upset by the exercise or exhibits changes that require counseling, the researchers will take care to immediately calm the child. If the child appears to need follow-up counseling due to his or her participation, the researchers will make appropriate referrals. The referral list will include the UCF Community Counseling Clinic (CCC) which provides free services to the community. Parents of children who are unable to complete the study still will be offered the incentive promised. As compensation for your participation we are offering you the opportunity to schedule a brief assessment of your child's general intellectual strengths and weaknesses. This assessment will not measure your child's global or overall IQ but it will provide you with information about verbal and nonverbal strengths and weaknesses as determined by a comparison to the average scores obtained by children the same age. This assessment will be conducted by a graduate student in the clinical psychology doctoral program at the University of Central Florida. This student will work under the supervision of a state licensed clinical psychologist. Group results of this study are anticipated to be available in December of 2006 upon request. You have the opportunity to ask, and to have answered, any questions you may

have about this research at any point during the study. If you have such questions, you may call Sharon Hayes at (407) 823-3872 or Dr. Stacey Tantleff Dunn at (407) 823-3578.

This research study has been reviewed and approved by the UCF Institutional Review Board. Questions or concerns regarding research participants' rights may be directed to the UCF IRB, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The telephone number is 407-823-2091. If you believe you have been injured during participation in this research project, you may file a claim with UCF Environmental Health & Safety, Risk and Insurance Office, P.O. Box 163500, Orlando, FL 32816-3500 (407) 823-6300. The University of Central Florida is an agency of the State of Florida for purposes of sovereign immunity and the university's and the state's liability for personal injury or property damage is extremely limited under Florida law. Accordingly, the university's and the state's ability to compensate you for any personal injury or property damage suffered during this research project is very limited.

Sincerely,

Sharon Hayes
Clinical Psychology Doctoral Student

_____I have read the procedure described above.

_____My questions have been answered to my satisfaction, and I voluntarily agree to participate in this study. I understand that I will receive a copy of this consent form after it is signed.

_____I voluntarily give my consent for my child, _____, to participate in the current study.

_____/_____

Parent/Guardian Date

_____I voluntarily give my consent for a photograph of my child's face to be taken for the purposes of this study. I understand that this photograph will only be of my child's face and will be immediately deleted upon completion of the study.

_____/_____

Parent/Guardian Date

_____I do NOT give my consent for a photograph of my child's face to be taken for the purposes of this study.

_____/_____

Parent/Guardian Date

_____I would like to receive a copy of the procedure description.

_____I would not like to receive a copy of the procedure description.

_____/_____

2nd Parent/Guardian Date
(or Witness if no 2nd Parent/Guardian)

Human Participants Parental Informed Consent Form to Maintain Videotapes

You and your child are invited to be in a research study of popular animated children's media and body image. This study is being conducted by Sharon Hayes and Dr. Stacey Tantleff Dunn at the University of Central Florida. We ask that you read this document and ask any questions you may have before agreeing to be in the study.

With your permission, your child will be videotaped during her time spent in the playroom as described in the previous consent form. The video will be accessible only to the research team for observational purposes. At the end of the study, the tape will be erased unless you provide written permission to allow the researcher to retain the tape for future research and/or educational purposes. Although the children will be asked their names, their identity will be kept confidential to the extent provided by law. This form allows you to provide your consent to allow the researcher to maintain a copy of your child's videotaped participation. This tape would be used only for future research and educational purposes. Examples of future use include but are not limited to follow-up studies and educational and research conferences such as the American Psychological Association's annual meeting. It is important to note that your child's face may be visible on this tape. It is possible that your child's face may be seen by other professionals if the tape is shown at a research conference. Only the primary researchers, Sharon Hayes and Dr. Stacey Tantleff Dunn, will have access to and your permission to use the videotape of your child's participation.

You and your child have the right to withdraw consent for the maintenance of your child's videotaped participation at any time. Consent to allow maintenance of your child's videotaped participation is not required. You will receive the compensation for your child's participation as described in the previous consent forms regardless of consent to allow the maintenance of your child's videotaped participation. You have the opportunity to ask, and to have answered, any questions you may have about this research at any point during the study. If you have such questions, you may call Sharon Hayes at (407) 823-3872 or Dr. Stacey Tantleff Dunn at (407) 823-3578.

This research study has been reviewed and approved by the UCF Institutional Review Board. Questions or concerns regarding research participants' rights may be directed to the UCF IRB, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The telephone number is 407-823-2091. If you believe you have been injured

during participation in this research project, you may file a claim with UCF Environmental Health & Safety, Risk and Insurance Office, P.O. Box 163500, Orlando, FL 32816-3500 (407) 823-6300. The University of Central Florida is an agency of the State of Florida for purposes of sovereign immunity and the university's and the state's liability for personal injury or property damage is extremely limited under Florida law. Accordingly, the university's and the state's ability to compensate you for any personal injury or property damage suffered during this research project is very limited.

_____I have read the information provided above. My questions have been answered to my satisfaction, and I voluntarily agree to participate in this study. I understand that I will

receive a copy of this consent form after it is signed.

_____I voluntarily give my consent for Sharon Hayes and Dr. Stacey Tantleff Dunn to maintain a copy of my child's, _____, videotaped participation and understand that this videotape will only be used for future research and educational purposes.

_____/_____

Parent/Guardian Date

_____/_____

2nd Parent/Guardian Date

(or Witness if no 2nd Parent/Guardian)

_____I do NOT give my consent for Sharon Hayes and Dr. Stacey Tantleff Dunn to maintain a copy of my child's, _____, videotaped participation.

_____/_____

Parent/Guardian Date

_____/_____

2nd Parent/Guardian Date

(or Witness if no 2nd Parent/Guardian)

APPENDIX C: STIMULI

Control Media	Experimental Media
Care Bears	Aladdin
Clifford	Anastasia
Dora the Explorer	Barbie and the Nutcracker
Dragon Tales	Barbie and the Princess and the Pauper
Lilo and Stitch	Beauty and the Beast
Monsters, Inc.	Cinderella
The Rescuers	Hercules
	Little Mermaid
	Peter Pan
	Sleeping Beauty

APPENDIX D: BEHAVIORAL OBSERVATION FORM

Place a mark in the box each time you witness the following behavior:

The child…

Brief description of child's appearance: _____

Looked in the mirror without costume ___:___ - ___:___, ___:___ - ___:___

□ □

Comments: (Mark a box every 15 seconds)

_____

Looked in the mirror while dressed in costume ___:___ - ___:___, ___:___ - ___:___

□ □

Comments: (mark a box every 15 seconds)

Costume 1: _____, ___:___ - ___:___, ___:___ - ___:___

Costume 2: _____, ___:___ - ___:___, ___:___ - ___:___

Costume 3: _____, ___:___ - ___:___, ___:___ - ___:___

Costume 4: _____, ___:___ - ___:___, ___:___ - ___:___

Costume 5: _____, ___:___ - ___:___, ___:___ - ___:___

Engaged playmate in activity. *(Mark activity and time)*

□ □

Activity:_____ ___:___ - ___:___, ___:___ - ___:___,

Activity _____ ___:___ - ___:___, ___:___ - ___:___,

Vanity Station: _____ ___:___ - ___:___, ___:___ - ___:___,

Doll House: _____ ___:___ - ___:___, ___:___ - ___:___,

Dress-Up: _____ ___:___ - ___:___, ___:___ - ___:___

Comments

_____

_____

Played alone. (Mark activity and time) □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Activity:_____ ___:___ - ___:___, ___:___ - ___:___,

Activity _____ ___:___ - ___:___, ___:___ - ___:___,

Vanity Station: _____ ___:___ - ___:___, ___:___ - ___:___,

Doll House: _____ ___:___ - ___:___, ___:___ - ___:___,

Dress-Up: _____ ___:___ - ___:___, ___:___ - ___:___

Comments

_____

Put on costume/Changed their costume □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Costume 1: _____ ___:___ - ___:___, ___:___ - ___:___

Costume 2: _____ ___:___ - ___:___, ___:___ - ___:___

Costume 3: _____ ___:___ - ___:___, ___:___ - ___:___

Costume 4: _____ ___:___ - ___:___, ___:___ - ___:___

Costume 5: _____ ___:___ - ___:___, ___:___ - ___:___

Comments:_____

***Acted out a part of a clip in the video**: (Note if Dramatically or With toys)*

□ □

Acting activity 1: _____ ___:___ - ___:___, Drama □ W/toys □

Acting activity 2: _____ ___:___ - ___:___, Drama □ W/toys □

Comments (mark every 15 seconds)

_____

Acted like a specific character from one of the clips

□ □

Who 1: _____ ___:___ - ___:___, ___:___ - ___:___

Who 2: _____ ___:___ - ___:___, ___:___ - ___:___

Comments:

_____

Made a positive AR comment about a character in the video

□ □

Comment & Context 1: _____

Comment & Context 2: _____

Comments: (check box each time they do it)

_____

_____

Made a positive AR comment about herself □ □ □ □ □ □ □ □ □ □ □ □ □

Comments:_____

_____

Made a positive AR comment to playmate □ □ □ □ □ □ □ □ □ □ □ □ □

Comments:_____

_____

Made a negative AR comment about a character in the video

□ □

Comments:_____

Made a negative comment about herself □ □ □ □ □ □ □ □ □ □ □ □ □

Comments:_____

Made a negative comment to playmate □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Comments:_____

Teased playmate about appearance □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Comments:_____

Cried □

___:___ - ___:___, ___:___ - ___:___,

Comments:_____

Laughed □

Comments:_____

Was aggressive □

Comments:

_____

Additional Comments: _____

APPENDIX E: CHILD INTERVIEW

1a. **Look in the mirror for me. Tell me who would you WANT to look like the most if you could look like anyone _____**

1 2 3 4 5

Mom Sister Character Famous Person Other relative_____

1b. **Tell me what they look like. _____**

_____

2a**. Look in the mirror and tell me who do you THINK you look like the most**

_____

1 2 3 4 5

Mom Sister Character Famous Person Other relative_____

2b**. Look in the mirror and Tell me what makes you look like them**

_____

3a. **Looking in the mirror, do you LIKE the way that you look? YES NO**

Depend on response ask positive or negative question first

3b. **Tell me what you LIKE about the way that you look**

_____

1 2 3 4 5

Hair Height/Size Clothing Shoes Eyes

6 **7**

Other appearance_____ Other _____

3c. **Tell me what you DON'T like about the way you look.**

_____

1 **2** **3** **4** **5**

Hair Height/Size Clothing Shoes Eyes

6 **7**

Other appearance_____ Other_____

I am going to ask you some questions using these 3 bars,

I want you to POINT to the bar when you answer

4a. **Point to how much you WORRY about being fat**

1 **2** **3**

Almost Never Sometimes Almost Always

4b. **Do you ever get TEASED (*Made fun of*) about being fat**

1 **2** **3**

Almost Never Sometimes Almost Always

4c. (***If so***) **Tell me who teases you**_____

1	**2**	**3**	**4**	**5**	**6**
Mother	Father	Brother	Sister	Friend	Other _____

4d. **Tell me what _____ says when they tease you** _____

_____

I am going to ask you some questions using these 3 bars,

I want you to POINT to the bar when you answer

5a**. Point to how much you WORRY about being skinny**

1	**2**	**3**
Almost Never	Sometimes	Almost Always

5b. **Point to how much you get TEASED (Made fun of) about being skinny**

1	**2**	**3**
Almost Never	Sometimes	Almost Always

5c. (if yes) **Tell me who teases you**_____

1	**2**	**3**	**4**	**5**	**6**
Mother	Father	Brother	Sister	Friend	Other _____

I am going to ask you some questions using these 3 bars,

I want you to POINT to the bar when you answer

6a. **Point to how much you get TEASED (Made fun of) about anything else**

1	**2**	**3**
Almost Never	Sometimes	Almost Always

6b. (if yes) **tell me who teases you_____**

1	**2**	**3**	**4**	**5**	**6**
Mother	Father	Brother	Sister	Friend	Other _____

6c. **Tell me what they tease you about/what they say** _____

_____

7a. **Looking in the mirror, tell me what you would change if you could change anything about the way you look**_____

1 **2** **3** **4** **5** **6**

Hair Height/Size Clothing Shoes Eyes Look like someone else

7 **8** **9**

Look like a character Look like a princess Other appearance_____

7b. *Weight related response* **Tell me what would you have to do to change that**

_____

8a. **Tell me if you could be a princess** **YES** **NO**

8b**. Looking in the mirror, tell me what would make you a princess**

_____

1 **2** **3** **4** **5** **6** **7**

Crown Clothing High Heels Makeup Nail polish Hair color Height/Size

8 **9** **10**

Other _____ Being a character Other appearance_____

8c. **Tell me what you would have to change about the way you look to be a princess** *(provide details as well)*

_____

1 **2** **3** **4** **5** **6** **7**

Crown Clothing High Heels Makeup Nail polish Hair color Height/Size

8 **9** **10**

Other _____ Being a character Other appearance_____

Princess Questions

Playmate: **These girls are all your age.**

1. **Point to the one you would like to play with the MOST.**

1 **2** **3**

Thin Average Large

2. **Tell me what makes her the one you want to play with.** (*Include detail too)*

_____

1 **2** **3** **4**

Weight Clothing Other appearance Other_____

3. **Point to the one you would NOT LIKE to play with.**

1 **2** **3**

Thin Average Large

4. **Tell me what makes her the one you do not want to play with.** (*Include detail too)*

_____

1 **2** **3** **4**

Weight Clothing Other appearance Other_____

Child Princess: **These girls are all your age, but only ONE is REAL a princess.**

5. **Point to the one you think is the REAL princess**

1 **2** **3**

Thin Average Large

6. **Tell me what makes her the real princess.** (*Include detail too)*

_____

1 **2** **3** **4**

Weight Clothing Other appearance Other_____

Adult Princess: These women are all the same age, but only ONE is a REAL princess.

7. **Point to the one you think is the princess**

1 **2** **3**

Thin Average Large

8. **Tell me what makes her the real princess.** (*Include detail too)*

_____

1 **2** **3** **4**

Weight Clothing Other appearance Other_____

APPENDIX F: DEMOGRAPHIC FORM

Please provide the following information about yourself and your child. All information will remain confidential and anonymous.

1. Your sex M F
2. Other parent or guardian's sex M F
3. Your Age _____
4. Other parent or guardian's age _____
5. Mother's Race (Please circle) African American Asian Caucasian Hispanic Biracial Other
6. Father's Race (Please circle) African American Asian Caucasian Hispanic Biracial Other
7. Child's Age _____
8. Child's Race: African American Asian Caucasian Hispanic Biracial Other
9. Child's Year in Preschool (Please circle) 1 2 3 4
10. Child's Year in school (Please circle) kindergarten 1 2
11. Do you own a television? Yes No
12. Do you subscribe to cable television? Yes No
13. Approximately how many hours per day *during the week* does your child watch television?

    0 1-5 5-10 10-15 15-20 25-30 30+

14. Approximately how many hours per day *during the <u>weekend</u>* does your child watch television?

    0 1-5 5-10 10-15 15-20 25-30 30+

15. Are there certain programs on television that you do NOT allow your child to view?

    _____

    _____

16. What are your child's favorite animated television shows? (Listing multiple shows is okay)

_____

_____

17. What are your child's favorite animated movies? (Listing multiple movies is okay)

_____

_____

18. Who are your child's favorite animated characters? (Listing multiple characters is okay)

_____

_____

19. Does your child ever act like or pretend to be one of her favorite characters?

Yes No If so, who? _____

20. How often does your child engage in this type of pretend play?

Less than once per week 1 x week 2-4 x week 5-6 x week Everyday

21. How often do you watch animated television shows or movies with your child?

Always Frequently Occasionally Rarely Never

22. How many times has your child visited one of the Walt Disney theme parks?

0 1-3 4-6 7-10 11 or more

23. Does your child play video games or online learning games that contain animated characters? No Yes Which ones? _____

APPENDIX G: WYBI

Fill in, circle, or check the appropriate response(s).

1. My child is ____ft. ____in. tall.

2. My child weighs ____lbs.

3. During the past year, your child's health has been:

Excellent Poor

1 2 3 4 5

4. Compared to other children the same age, do you think your child is

Much more Much less

physically attractive physically attractive

1 2 3 4 5

5. How important is it to you that your child is physically attractive?

Extremely important Not at all important

1 2 3 4 5

6. In your opinion is your child

Definitely Just Much too

overweight right skinny

1 2 3 4 5

7. Is your child handicapped?

No

Yes (describe) _____

8. Is your child physically disfigured?

No

Yes (describe) _____

9. Which statement best describes your child's diet during the past 6 months?

____ My child's diet is essentially healthy and nutritious.

____ My child's diet is a mix of healthy and unhealthy foods.

____ My child's diet consists largely of high fat, high-sugar, and junk foods.

10. Are you basically satisfied with your child's diet?

____ Yes

____ Yes, but I have to nag my child to eat properly.

____No, but my child's eating habits are difficult to control.

11. Thinking of the past 6 months, do you believe your child eats:

Too much Too little

1 2 3 4 5

12. Thinking of the past 6 months, how often did your child exercise for at least 20 minutes at a time?

____ Not at all

____ Less than once a week

____ Once or twice a week

____ 3 times a week

____ 4 or 5 times a week

____ 6 or more times a week

13. What athletic activities does your child participate in regularly?

_____

_____

14. Do you think your child exercises

Much too much				Much too little
1	2	3	4	5

15. Have you ever tried to help your child lose weight?

No

Yes (How?) _____

16. Have you ever tried to help your child gain weight?

No

Yes (How?) _____

17. Have you ever tried to help your child change his or her appearance?

No

Yes (How?) _____

18. How often do you or other family members praise your child about his or her appearance?

	Does not apply	Never				Frequently
Myself	0	1	2	3	4	5
My spouse	0	1	2	3	4	5
Child's siblings	0	1	2	3	4	5
Child's grandparents	0	1	2	3	4	5

19. How often do you or others tease or criticize your child about his or her appearance?

	Does not apply	Never				Frequently
Myself	0	1	2	3	4	5
My spouse	0	1	2	3	4	5
Child's siblings	0	1	2	3	4	5
Child's grandparents	0	1	2	3	4	5

20. How do you typically feel when your child is subjected to this kind of criticism about his/her appearance from others? (check all that apply.)

____ Annoyed at the person for being rude

____ Annoyed at my child

____ Sorry for my child

____ Sorry for myself

____ Embarrassed

____ Nothing, don't care

21. If your child is criticized about his or her appearance, what do you typically do? (check all that apply.)

____ Don' do anything

____ Put child on diet

____ Encourage child to exercise/firm up

____ Encourage child to take greater care of appearance

____ Comfort and reassure child

____ Express anger at person who made comment

____ Tell the person he/she is wrong

22. Have other people ever pressured you about your child's appearance?

No

Yes (explain) _____

23. In the past year, how often has your child expressed concern that he or she

	Never				Frequently
Is too fat	1	2	3	4	5
Is too thin	1	2	3	4	5
Is unattractive	1	2	3	4	5
Is unathletic/ uncoordinated	1	2	3	4	5
Doesn't have nice enough clothes	1	2	3	4	5

APPENDIX H: ASI

Indicate your beliefs about these items using the 1 to 5 scale below.

1 = *Strongly Disagree*	**2 = *Mostly Disagree***	**3 = *Neither Disagree nor Agree***	**4 = *Mostly Agree***	**5 = *Strongly Agree***	

1.	What I look like is an important part of who I am.	**1**	**2**	**3**	**4**	**5**
2.	What's wrong with my appearance is one of the first things that people will notice about me.	**1**	**2**	**3**	**4**	**5**
3.	One's outward physical appearance is a sign of the character of the inner person	**1**	**2**	**3**	**4**	**5**
4.	If I could look just as I wish, my life would be much happier.	**1**	**2**	**3**	**4**	**5**
5.	If people know how I *really* look, they would like me less.	**1**	**2**	**3**	**4**	**5**
6.	By controlling my appearance, I can control many of the social and emotional events in my life.	**1**	**2**	**3**	**4**	**5**
7.	My appearance is responsible for much of what has happened to me in my life.	**1**	**2**	**3**	**4**	**5**
8.	I should do whatever I can to always look my best.	**1**	**2**	**3**	**4**	**5**

9.	Aging will make me less attractive.	**1**	**2**	**3**	**4**	**5**
10.	For women: To be feminine, a woman must be as pretty as possible. For men: To be masculine, a man must be as handsome as possible.	**1**	**2**	**3**	**4**	**5**
11.	The media's messages in our society make it impossible for me to be satisfied with my appearance.	**1**	**2**	**3**	**4**	**5**
12.	The only way I could ever like my looks would be to change what I look like.	**1**	**2**	**3**	**4**	**5**
13.	Attractive people have it all.	**1**	**2**	**3**	**4**	**5**
14.	Homely people have a hard time finding happiness.	**1**	**2**	**3**	**4**	**5**

APPENDIX I: PASTAS

The statements listed below are to be used to describe how often IN GENERAL (that is, usually), you feel anxious, tense, or nervous about your body or specific parts of your body. Please read each statement and CIRCLE the number that best indicates the extent to which each statement holds true IN GENERAL. Remember, there are no right or wrong answers.

0 = NEVER 1 = RARELY 2 = SOMETIMES 3 = OFTEN 4 = ALMOST ALWAYS

IN GENERAL, I feel anxious, tense, concerned, or nervous about:

		Never	Rarely	Sometimes	Often	Always
1.	the extent to which I look overweight.	**0**	**1**	**2**	**3**	**4**
2.	my thighs.	**0**	**1**	**2**	**3**	**4**
3.	my buttocks.	**0**	**1**	**2**	**3**	**4**
4.	my hips.	**0**	**1**	**2**	**3**	**4**
5.	my stomach (abdomen).	**0**	**1**	**2**	**3**	**4**
6.	my legs.	**0**	**1**	**2**	**3**	**4**
7.	my waist.	**0**	**1**	**2**	**3**	**4**
8.	my muscle tone.	**0**	**1**	**2**	**3**	**4**
9.	my ears.	**0**	**1**	**2**	**3**	**4**
10.	my lips.	**0**	**1**	**2**	**3**	**4**
11.	my wrists.	**0**	**1**	**2**	**3**	**4**

12.	my hands.	**0**	**1**	**2**	**3**	**4**
13.	my forehead.	**0**	**1**	**2**	**3**	**4**
14.	my neck.	**0**	**1**	**2**	**3**	**4**
15.	my chin.	**0**	**1**	**2**	**3**	**4**
16.	my feet.	**0**	**1**	**2**	**3**	**4**

APPENDIX J: DEBRIEFING FORM

Effects of Popular Children's Media on Preschoolers' Body Image

Research conducted by Sharon Hayes, B.S. and Stacey Tantleff Dunn, Ph.D.

University of Central Florida.

Thank you for your participation in this research project. Participation by parents and children like you is critical for the research and results to be relevant. The purpose of this study is to ascertain a clearer understanding of the relationship between subjects such as messages in popular children's media, body image, play behavior, and appearance-related attitudes.

Recent research has revealed that children as young as five and six years old report experiencing some body image dissatisfaction and are able to identify the thin ideal that exists in Western society (Lowes & Tiggemann, 2003). Levin (1994) determined the average American child exhausted up to 35 hours per week watching television and/or playing video games. Even toddlers are watching quite a bit of television with the average 2 year old viewing approximately 10.5 hours per week and the average 4 year old viewing 17.5 hours per week (Liebert & Sprafkin, 1988). Some researchers concluded that the thin ideal is depicted in animated children's media just like non-animated media (Herbozo, Tantleff-Dunn, Gokee-LaRose, & Thompson, 2003). It has been established that adults who are exposed to images of the thin ideal are more likely to report being more dissatisfied with their own and others physical appearances. Many researchers have suggested a need for future studies to examine the development of body image and weight concerns with young children, as well as sociocultural factors that may contribute to and reinforce cultural ideals and biases (Davison, Markey, & Birch, 2003; Herbozo, et al., 2003).

As a reminder, your participation was *completely confidential*. If you or your child experience discomfort or negative feelings after your participation in the study, you may call Dr. Stacey Dunn at the University of Central Florida.

Thank you, your participation is very much appreciated.

Dr. Stacey Tantleff-Dunn	(407) 823-5378
Dr. Bob Dipboye, Psychology Department Chair	(407) 823-2216

If you are interested in learning more about body image or eating disorders, we recommend the following resources:

National Eating Disorders Organization	(918) 481-4044
National Eating Disorders Association	(206) 382-3587
The Alliance for Eating Disorders Awareness	(866) 662-1235

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