Grounded in objectification theory, the 2 studies presented here predicted that self-objectification is positively related to appearance-related communication (i.e., fat talk and old talk), and, in turn, appearance-related communication is associated with health and well-being outcomes. Results from Study 1, which investigated only fat talk, revealed that fat talk significantly mediated the relationship between self-objectification and body dissatisfaction, drive for thinness, bulimia, and self-esteem. Study 2 sought to replicate the findings from Study 1, as well as extend appearance-related communication to old talk. Fat talk was found to mediate the relationships between self-objectification and body dissatisfaction, drive for thinness, bulimia, depression, and diet. Old talk significantly mediated the relationships between body dissatisfaction, drive for thinness, and...
Sociocultural pressures from media, family, and peers have made women's bodies an important component in how they evaluate themselves and others (Harrison, Taylor, & Marske, 2006; Tiggemann, Polivy, & Hargreaves, 2009). Such messages and images, for the most part, objectify women's bodies and emphasize an unattainable standard for beauty ideals (Fredrickson & Roberts, 1997). As a result, many women feel a desire to fit an ideal body image and experience “normative discontent” with their bodies (Rodin, Silberstein, & Striegel-Moore, 1984).

Because women's bodies are tied to their sense of self-worth and because of heightened dissatisfaction with their bodies, women's communication is often focused on appearance-related issues. Communication about weight and age, in particular, are subjects of increasing interest for researchers and health professionals alike because of their prevalence in everyday talk among women and the concomitant health consequences (Becker, Diedrichs, Jankowski, & Werchan, 2013; Sharpe, Naumann, Treasure, & Schmidt, 2013).

The current study uses objectification theory (Fredrickson & Roberts, 1997) to connect the experience of self-objectification to weight- and age-related communication in order to provide a theoretical foundation to appearance-related talk. Specifically, this research proposes that negative appearance-related communication is a potential mechanism through which self-objectification is associated with negative health and well-being outcomes, including body dissatisfaction, drive for thinness, bulimia, depression, self-esteem, diet, and exercise.

Objectification theory

Objectification theory proposes that, in a society that upholds pressures and expectations of beauty and attraction, women's bodies are objectified (Fredrickson & Roberts, 1997). Stemming from a feminist perspective, the theory proposes that women's body experience is socially constructed by society's ideal and unattainable standards of beauty. Objectification occurs when “women are treated as bodies—and in particular, as bodies that exist for the use and pleasure of others” (Fredrickson & Roberts, 1997, p. 175).

The objectification of women's bodies is apparent in the omnipresent images of the thin-ideal and sexualized models shown in the media (e.g., Field et al., 2001; Hofschire & Greenberg, 2001; Levine & Harrison, 2003; Tiggemann, 2005). As a result, women are socialized with this objectification and are inclined to self-objectify, meaning that they view their own bodies as objects that should be evaluated.

Self-objectification is thought to be a form of self-consciousness and involves women internalizing an observer's perspective of their bodies (Miner-Rubino, Twenge, & Fredrickson, 2002; Tiggemann & Lynch, 2001). Self-objectification puts women at risk for a series of unhealthy consequences, including increased body shame, anxiety, and self-consciousness, as well as heightened mental health threats such as depression, anorexia nervosa, bulimia, and sexual dysfunction (for a review of
objectification theory, see Moradi & Huang, 2008).

As Fredrickson and Roberts’ (1997) and other feminists would affirm, the socially constructed objectification of women’s bodies is maintained through social interactions (Berger & Luckmann, 1966). Appearance-related communication is predicted to be one way by which women behaviorally perpetuate and develop personal and societal pressures and desires about appearance. Talk about appearance has consequences for people’s attitudes and beliefs and, given that the tone of such talk is typically negative, the consequences identified also tend to be negative.

For example, overhearing another person engage in fat talk increases body dissatisfaction, increases one's own likelihood of engaging in fat talk, and leads to increased levels of body dissatisfaction (Gapinski, Brownell, & LaFrance, 2003; Salk & Engeln-Maddox, 2011a; Stice, Maxfield, & Wells, 2003). Thus, by engaging in appearance-related talk, women are not only maintaining society's objectification of their bodies, they are also actively self-objectifying and reinforcing negative self-perceptions.

**Appearance-related communication**

The current study focuses particularly on weight- and age-related communication because weight and age (a) each have legitimate health issues associated with them (e.g., obesity is associated with significant health risks and old age usually involves increased risk of chronic health problems), (b) are both associated with multibillion dollar industries designed to conceal and prevent stigmatized physical signs (e.g., Marketdata Enterprises Inc., 2011), and (c) both relate in fundamental ways to individuals' bodies, issues of appearance, cultural standards of attractiveness, as well as the importance women place on their own and others' bodies.

Perhaps more importantly, however, this research focuses on weight and age because they are phenomena about which women appear to talk frequently. Brief references to “needing to lose weight” or “getting older” occur habitually in everyday conversations, and extended discussions of both topics are also common in certain populations (e.g., age: Coupland, Coupland, & Giles, 1991; weight: Nichter, 2000). Talk about age and weight frequently involves expressing dissatisfaction with oneself, and both manifest primarily negative attitudes and stereotypes about changes in appearance (i.e., gaining weight and looking older).

*Fat talk* is the extension of objectification into the realm of interpersonal relations (Tucker, Martz, Curtin, & Bazzini, 2007). Fat talk refers to the everyday conversations that women have with each other about their own and others' bodies (e.g., “I'm so fat!” “No you're not, I'm the one who is fat!”), including comments about what one's eating and exercise habits should be and fears of becoming out of shape or overweight, among others (Nichter, 2000; Ousley, Cordero, & White, 2008).

Fat talk interactions are normative and expected among women (Britton, Martz, Bazzini, Curtin, & LeaShomb, 2006; Tompkins, Martz, Rocheleau, & Bazzini, 2009), as nearly all college women (93%) report engaging in fat talk (Salk & Engeln-Maddox, 2011b). These conversations occur from adolescence into adulthood and occur in women of all different body types, including women with eating disorders, women who are of normal weight, and women who are overweight (Martz, Petroff, Curtin, & Bazzini, 2009; Stice et al., 2003). In addition to its prevalence and pervasiveness, fat talk is a growing health concern because such comments are often predictive of higher levels of
depression, perceived pressure to be thin, and body dissatisfaction (Arroyo & Harwood, 2012; Sharpe et al., 2013).

Less research has explored age-related communication as it relates to appearance and body image, but there are clear parallels to fat talk. Old talk refers to negative self-referential statements that draw attention to age and the aging process (Becker et al., 2013; Stripling, 2011). The current study focuses particularly on appearance-related concerns of aging, including the notice of wrinkles, wanting to get teeth whitened, wanting to look younger, and considering plastic surgery (e.g., facelifts), among others.

Comments of this sort are thought to be rooted in and representative of internalized ageism (Emlet, 2006), the consequences of which can include decreased quality of life and shorter life spans for older adults (Levy, Ashman, & Dror, 2000). Becker et al. (2013) report that more than half of their female participants (ranging from 18 to 87) engage in old talk, which is likely because women are frequently age-stereotyped and suffer from negative age-related attitudes on a number of dimensions (Kite, Stockdale, Whitley, & Johnson, 2005).

Stripling (2011) found that most participants engage in old talk in an effort to explain physical, social, and mental decline and such comments are motivated by ipsative (i.e., explaining one’s behavior by comparing it to one’s own prior behavior) and justification (i.e., justifying or excusing a behavior) reasons (Coupland et al., 1991). Similar to fat talk, old talk is positively associated with unhealthy appearance-related attitudes among women, including higher levels of thin-ideal internalization, body dissatisfaction, self-objectification, aging-related appearance anxiety, drive for thinness, and eating disorder pathology (Becker et al., 2013).

In an investigation of both fat talk and old talk, Becker et al. (2013) found that the two types of talk are significantly correlated (r = .54). This is not surprising given that weight- and age-related concerns are intertwined in the empirical literature: People who are more concerned about the losses associated with aging experience more body-weight perception problems (Gupta & Schork, 1993; Lewis & Cachelin, 2001).

However, fat talk and age talk are not perfectly correlated, suggesting that they have some similar and some unique qualities. For instance, age carries with it specific anxieties that go beyond concerns about appearance (e.g., fear of death, loss, and bereavement; Martens, Goldenberg, & Greenberg, 2005; Lasher & Faulkender, 1993).

Nonetheless, given the correlation between age- and weight-related communication, the parallels between the two underlying phenomena (e.g., health and cultural issues associated with both weight and age), and because we are interested in solely appearance-related talk, we predict that fat talk and old talk will be associated with similar health and well-being outcomes because of the self-objectifying nature of both types of talk. From an objectification framework, both types of talk should have comparable predictive effects because they are rooted in a self-consciousness associated with society’s objectification of women’s bodies.

The present research

Although past research has linked appearance-related communication to negative health outcomes (e.g., Arroyo & Harwood, 2012), the literature is meager in terms of offering and testing theoretical
reasons for how such communication is related to health and well-being outcomes. In two separate studies, the present research seeks to remedy this concern by proposing objectification theory as an explanation for this connection. Study 1 examines the link between self-objectification, fat talk, and health among young adult females; Study 2 extends Study 1 by examining old talk and fat talk among young adult females and their friends.

The health and well-being outcomes include body dissatisfaction, drive for thinness, bulimia, depression, self-esteem, diet, and exercise. Although they may vary in terms of severity in relation to “health,” higher levels on each of these dependent variables represent the multiple types of outcomes that have been previously associated with self-objectification, including self-perceptions and motivations, behaviors, and clinical disorders (Fredrickson & Roberts, 1997; Moradi & Huang, 2008; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

We ground this work in objectification theory's central premise that women treat their bodies as objects, and this is expressed in their self-evaluative communication about appearance. Fat talk and age talk comments appear to be representative of fear, hopelessness, and self-evaluations, which is the process that creates a risk for various health issues (e.g., depression; Beck, 1974). Experimental research shows that women who are exposed to highly objectifying images and experience self-objectification subsequently describe their appearance more negatively than women who are not exposed to those images (Aubrey, Henson, Hopper, & Smith, 2009), concluding that self-objectification leads to negative self-talk.

Further, longitudinal research finds that the act of making fat talk comments predicts increased levels of depression and drive for thinness (Arroyo & Harwood, 2012), suggesting that such talk has consequences for people's health and well-being. These findings support the idea that appearance-related talk may be one way in which women verbally and critically evaluate their bodies. Thus we predict that fat and old talk are a behavioral mechanism by which self-objectification is incorporated into broader negative feelings about the self (Arroyo & Harwood, 2012).

Moreover, we predict that making self-objectifying and disparaging comments is associated with negative health and well-being outcomes. Rumination is a robust predictor of internalizing symptoms because it involves a cognitive focus on distress and misery without active coping or problem solving to alleviate the distress (Nolen-Hoeksema, 1991). Fat talk and old talk may be the behavioral manifestation of this tendency, as engaging in this type of talk with others is an example of corumination.

Corumination is a relatively “non-solution-focused discussion of problems” (Calmes & Roberts, 2008, p. 578) that occurs repeatedly, frequently, and passively among dyads and is predictive of increases in depression, anxiety, and impaired problem solving (Calmes & Roberts, 2008; Rose, 2002; Rose, Carlson, & Waller, 2007). Corumination is particularly destructive as it relates to appearance-related communication because it reinforces already held beliefs about appearance, increases the propensity to think and speak negatively about oneself, and also cultivates negative self-perceptions and health behaviors.

Self-perception theory (Bem, 1972) explains that people refer to their own overt behaviors, including communication, in order to make attributions about their attitudes. If fat talk and old talk are behaviors encouraged by self-objectification that heighten the salience of evaluating women on the basis of
weight and age, and increase comparisons between the self and others, engaging in appearance-related communication might encourage women to conclude that they are dissatisfied with their bodies because of the comments they made as self-perception theory suggests.

Toward that end, we predict that engaging in fat talk and old talk is one way by which self-objectification is associated with negative health and well-being outcomes. Women who experience higher levels of self-objectification will report engaging in more appearance-related communication, and, in turn, higher levels of appearance-related communication will be associated with negative health and well-being outcomes. Specifically, it is hypothesized that:

\[ H1: \text{Fat talk and old talk mediate the relationship between self-objectification and health and well-being outcomes.} \]

**Study 1**

**Method**

*Participants and procedure*

Undergraduate women were recruited from classes at a large university in the southwestern United States. Students were given links to an online questionnaire and received extra credit from their instructors in exchange for their participation. College students are especially vulnerable to appearance-related concerns because of specific factors associated with being a college student, including psychological distress, weight gain, and pressures about appearance, that make them susceptible to poor health outcomes (Dickstein, 1989; Maine & Bunnell, 2008). All participants were female (\( N = 201 \)) and a majority of them were White (83.10%; 7.50% Latina, 3.50% African American, 3.00% Asian, and 3.00% other). The average body mass index (BMI) of the sample was 21.99 (\( SD = 2.99 \)): 38.5% of women in the sample had a normal BMI (between 18.5 and 24.9) and 49.3% were considered as overweight (BMI between 25 and 29.9).

*Measures*

Self-objectification was measured using a body surveillance instrument, which is often used as an indicator of self-objectification (e.g., Aubrey, 2006). The Body Surveillance Subscale from McKinley and Hyde’s (1996) Objectified Body Consciousness Scale assessed participants’ tendency to evaluate their bodies (e.g., “During the day, I think about how I look many times”). These items were measured on 5-point Likert Scales (1 = *strongly disagree* to 5 = *strongly agree*); items were averaged, with high scores denoting higher levels of self-objectification (\( M = 3.53; \ SD = .63; \alpha = .75 \)).

Fat talk was measured using Engeln-Maddox, Salk, and Miller’s (2012) Negative Body Talk Scale. Participants rated the frequency of saying similar comments to each of 13 different statements in the past week (e.g., “I need to go on a diet”). The directions stressed to the participants that they did not have to say the exact statement provided in the questionnaire, rather they were asked to think about
whether they said things similar to the presented items. This scale was measured on a 6-point Likert Scale (1 = never to 6 = always); items were averaged, with high scores denoting more frequent fat talk (M = 3.10; SD = .91; α = .95).

Body dissatisfaction, defined as dissatisfaction with overall body shape and size of specific body regions (i.e., hips, stomach, buttocks), was measured with Garner’s (2004) Body Dissatisfaction Subscale from the Eating Disorders Inventory-3 (e.g., “I think my stomach is too big”). This 10-item subscale was rated on a 6-point Likert Scale (1 = never to 6 = always); items were averaged, with high scores denoting higher body dissatisfaction (M = 3.45; SD = .95; α = .86).

Drive for thinness was measured using the Drive for Thinness Subscale from Garner’s (2004) Eating Disorders Inventory-3. Its seven items (e.g., “I am terrified of gaining weight”) were rated on a 6-point Likert Scale (1 = never to 6 = always). Items were averaged, with high scores denoting higher levels of drive for thinness (M = 3.32; SD = 1.01; α = .89).

Bulimia was measured using the bulimia subscale from Garner’s (2004) Eating Disorders Inventory-3. The 8-item bulimia subscale measures individuals’ tendency to engage in and think about uncontrollable binge eating and overeating (e.g., “I have thought of trying to vomit in order to lose weight”). Items were rated on a 6-point Likert Scale (1 = never to 6 = always) and were averaged, with high scores denoting higher levels of bulimia (M = 2.16; SD = .83; α = .87).

Depression was measured with the Depression Subscale of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983). These seven items were rated on different 4-point Likert Scales (e.g., “I feel cheerful” [R]: 1 = not at all, 2 = not often, 3 = sometimes, 4 = most of the time). Items were averaged, with high scores denoting higher levels of depression (M = 1.42; SD = .38; α = .75).

Self-esteem was measured using Rosenberg’s (1989) self-esteem scale (e.g., “I take a positive attitude toward myself”). The 10 items were measured on 5-point Likert Scales (1 = strongly disagree to 5 = strongly agree); items were averaged, with high scores denoting higher levels of self-esteem (M = 3.78; SD = .64; α = .68).

**Results**

The zero-order correlations of the Study 1 variables can be found in Table 1. As shown, fat talk was significantly associated with self-objectification, such that higher levels of self-objectification were associated with higher levels of fat talk. Further, fat talk and self-objectification were both positively related to body dissatisfaction, drive for thinness, bulimia, and depression, and negatively related to self-esteem.

**Table 1. Zero-Order Correlations From Study 1: Fat Talk**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body mass index</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Self-objectification</td>
<td>-.03</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Hypothesis testing was conducted using bootstrapped tests of indirect effects using Hayes' (2013) PROCESS Macro for SPSS. The macro estimates regression coefficients between the predictor variable and the mediator variable (a path) and between the mediator and the dependent variable (b path), as well as the direct effect of the independent variable on the dependent variable controlling for the mediator (c' path) and the indirect effect of the independent variable on the dependent variable through the mediating variable (ab path). The models used 5,000 bootstrapped resamples that generated 95% bias corrected and adjusted confidence intervals for the indirect effect; confidence intervals not including zero demonstrated a statistically significant indirect effect. Separate models were conducted for each of the dependent variables; BMI was a covariate in all analyses.

As shown in Table 2, the hypothesis that fat talk is a mechanism through which self-objectification is related to health was supported. Fat talk significantly mediated the relationship between self-objectification and body dissatisfaction, drive for thinness, bulimia, and self-esteem, but not depression. In each case, self-objectification was positively associated with fat talk, and fat talk, in turn, was positively related to unhealthy outcomes, but negatively related to the one healthy outcome (self-esteem).

**Table 2.** The Mediating Role of Fat Talk on the Relationship Between Self-Objectification and Health Outcome Variables: Study 1

<table>
<thead>
<tr>
<th>Dependent Variable (DV)</th>
<th>Objectification → Talk (a path)</th>
<th>Talk → DV (b path)</th>
<th>Objectification → DV (Direct: c' path)</th>
<th>Objectification → DV (Indirect: ab path)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body dissatisfaction</td>
<td>.52 *</td>
<td>.55 *</td>
<td>.36 *</td>
<td>.28 *</td>
<td>[.18, .44]</td>
</tr>
</tbody>
</table>

* p < .05.
** p < .01.
Note: Coefficients are unstandardized regression coefficients from Hayes (2013) Process macro in SPSS. Statistically significant confidence intervals (CI) indicate that the indirect effect differs significantly from zero, and hence that there is statistically significant mediation. Body mass index was used as a covariate in each of the analyses.

* p < .05.

Study 2

Method

Participants and procedure

Data from this study were a part of a larger study on communication and body image. Undergraduate women and a same-sex, platonic friend (N = 196; 92 dyads) completed an online questionnaire. The student was recruited from classes at a large university in the southwestern United States, and e-mailed the primary investigator the name and e-mail address of the female friend, and then both women were emailed separate links to an online questionnaire. In exchange for their participation, students received extra credit from their instructors and the friends received $5 gift cards.

The data for Study 2 were collected from dyads because this is the social context in which fat talk and old talk most commonly occur. However, the central hypothesis is concerned with individual-level effects (i.e., one's own self-objectification → one's own communication → one's own health). For this reason, analyses were conducted at the individual level while controlling for dyadic interdependence. The dyads are indistinguishable because there is no meaningful way of ordering the two individuals' data (Kenny, Kashy, & Cook, 2006), however, the participants that were offered extra credit in one of their courses will be referred to as “students” and the friends they asked to participate in this study with them will be referred to as “friends” to distinguish between them for measurement and descriptive
analyses. Displaying students’ and friends’ measurement statistics separately allows for the calculation of scale reliability without violating the independence assumption of Cronbach’s alpha.

The students had an average BMI of 22.53 (SD = 2.86), an average age of 19.45 (SD = 1.32), and were 66.7% White, 13.50% Latina, 7.50% African American, 8.30% Asian, and 4.20% other; friends' average BMI = 22.32 (SD = 4.21); average age = 20.14 (SD = 6.42); and 60.4% were White, 18.8% Latina, 5.2% African American, 11.5% Asian, and 4.1% other. Participants' friendship length was calculated by averaging both friends' reports of relationship length in months (M = 40.57 months, SD = 61.75). Less than half of the participants were roommates (45.8% as reported by both students and friends) and most reported seeing each other every day in the past week (Students: 70.8% every day, 17.7% every other day, 11.5% three times a week; Friends: 68.8.8% every day, 17.7% every other day, 13.5% three times a week).

Although a college population involves a restricted age range, Stripling (2011) found that, although there is a linear trend between age and old talk, “an interesting point occurred at age 23, when the number of people in the sample who reported engaging in old talk first exceeded those who reported denying old talk engagement” (p. 59). She further explained “this shift to engage in old talk, at or around age 23, corresponds with a self-identity shift from adolescence to adulthood” (p. 59). Thus, the current sample includes individuals from ages before and after the shift in old talk (age range of students: 17–26; age range of friends: 18–80) and there is variability in old talk frequency among this sample as well.

**Measures**

Old talk was measured using Becker et al.’s (2013) Old Talk Scale. This scale included nine scenarios in which a woman named Anna is talking to her female friends and appearance-related old talk occurs (e.g., (a) “Anna is having a bad day. She does not feel herself and is somewhat down. While walking to a meeting, a female coworker says that she looks nice today. Anna groans and says “You obviously aren’t looking at my face—I think I developed new wrinkles overnight. I look so old and tired.” (b) “Anna is shopping with her friend Emily. Anna is at the cosmetics counter and asks Emily “what do you use on your skin. I need something that will make me look younger. I keep trying different things but nothing works.” Emily suggests checking out a recent fashion magazine review of antiaging products.”). Participants rated the extent to which they would respond as Anna did in each scenario on a 5-point Likert Scale (1 = never; 5 = always); items were averaged, with high scores denoting higher levels of old talk (Students: M = 2.04; SD = .72; α = .83; Friends: M = 2.19; SD = .91; α = .92).

Depression was measured with a short version of the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977; Zhang et al., 2012). In response to how they felt in the last week, participants rated 10 items (e.g., “I felt depressed”) on 4-point Likert Scales (1 = rarely or none of the time to 4 = all of the time ). Zhang et al. (2012) found that this 10-item version is highly correlated with the original 20-item version, has the same underlying factors, and has satisfactory reliability. The items were averaged, with high scores denoting higher levels of depression (Students: M = 1.97; SD = .59; α = .83; Friends: M = 1.93; SD = .52; α = .74).

Exercise (Students: M = 3.72; SD = 1.00; α = .87; Friends: M = 3.79; SD = 1.07; α = .86) and diet (Students: M = 3.09; SD = .84; α = .84; Friends: M = 3.27; SD = .90; α = .84) were measured with
an adapted scale from Jackson (2006). The original scale consists of 58 items measuring diet, exercise, medical adherence, substance abuse, and sleep. For theoretical reasons, participants only completed items related to diet (seven items: e.g., “I tend to limit fat, sugar, or salt in my meals.”) and exercise (seven items: e.g., “I tend to get aerobic (e.g., cardio) exercise almost daily”) behaviors because they are most related to weight and appearance concerns.

The remaining variables were measured with the same scales as Study 1: Self-objectification (Students: $M = 2.04$; $SD = .75$; $\alpha = .74$; Friends: $M = 3.63$; $SD = .07$; $\alpha = .83$), fat talk (Students: $M = 2.73$; $SD = .96$; $\alpha = .88$; Friends: $M = 2.75$; $SD = 1.14$; $\alpha = .93$), body dissatisfaction (Students: $M = 3.12$; $SD = .79$; $\alpha = .83$; Friends: $M = 3.05$; $SD = .87$; $\alpha = .83$), drive for thinness (Students: $M = 3.38$; $SD = 1.00$; $\alpha = .82$; Friends: $M = 3.38$; $SD = 1.07$; $\alpha = .85$), and bulimia (Students: $M = 2.30$; $SD = .82$; $\alpha = .84$; Friends: $M = 2.20$; $SD = .83$; $\alpha = .83$).

**Results**

In contrast to the individual level data in Study 1, Study 2 analyzed a mediation model with nonindependent data from nondistinguishable dyads. Results generally supported the assumption of nonindependence in the data (Table 3), as intraclass correlations (ICC) greater than .05 (Hayes, 2006) warrant the assumption of nonindependence when analyzing dyadic data.

**Table 3.** Student by Student and Friend by Friend Intercorrelations of Study 2 Variables

<table>
<thead>
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<th>7</th>
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</thead>
<tbody>
<tr>
<td>1. Self-objectification</td>
<td>.19</td>
<td>.15</td>
<td>.10</td>
<td>.38</td>
<td>.49</td>
<td>.18</td>
<td>.25</td>
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<tr>
<td>2. Fat talk</td>
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<td>.27</td>
<td>.35</td>
<td>.54</td>
<td>.55</td>
<td>.22</td>
<td>.50</td>
</tr>
<tr>
<td>3. Old talk</td>
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<td>.14</td>
<td>.33</td>
<td>.28</td>
<td>.03</td>
<td>.27</td>
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<tr>
<td>4. Body dissatisfaction</td>
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<td>.39</td>
<td>.37</td>
<td>.004</td>
<td>.66</td>
<td>.25</td>
<td>.51</td>
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<td>5. Drive for thinness</td>
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<td>.52</td>
<td>.28</td>
<td>.73</td>
<td>.14</td>
<td>.21</td>
<td>.59</td>
</tr>
<tr>
<td>6. Depression</td>
<td>.27</td>
<td>.20</td>
<td>.29</td>
<td>.27</td>
<td>.23</td>
<td>.14</td>
<td>.31</td>
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<tr>
<td>7. Bulimia</td>
<td>.18</td>
<td>.40</td>
<td>.40</td>
<td>.64</td>
<td>.58</td>
<td>.37</td>
<td>.16</td>
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<tr>
<td>8. Dieting</td>
<td>.31</td>
<td>.11</td>
<td>.17</td>
<td>.29</td>
<td>.50</td>
<td>.00</td>
<td>.10</td>
</tr>
<tr>
<td>9. Exercise</td>
<td>.14</td>
<td>.10</td>
<td>-.03</td>
<td>-.02</td>
<td>.21</td>
<td>-.25</td>
<td>-.20</td>
</tr>
<tr>
<td>10. Age</td>
<td>-.09</td>
<td>-.13</td>
<td>-.23</td>
<td>-.04</td>
<td>-.09</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>11. Body mass index</td>
<td>.21</td>
<td>.29</td>
<td>.22</td>
<td>.54</td>
<td>.44</td>
<td>.14</td>
<td>.36</td>
</tr>
</tbody>
</table>

*Note:* ICC's are bolded in the diagonal; Correlations of students are below the diagonal and correlations above the diagonal.

* $p < .05.$
Zero-order correlations of students' and friends' ratings of self-objectification, appearance-related communication, and health and well-being outcomes are shown in Tables 3 and 4. These tables indicate that fat talk and old talk are significantly associated with one another for both students and friends. For the students, self-objectification was positively associated with fat talk, old talk, body dissatisfaction, drive for thinness, depression, and dieting, and fat talk and old talk were both positively associated with body dissatisfaction, drive for thinness, depression, and bulimia. For the friends, self-objectification was positively associated with body dissatisfaction, drive for thinness, and bulimia, fat talk was positively associated with body dissatisfaction, drive for thinness, depression, bulimia, and dieting, and old talk was positively associated with body dissatisfaction, drive for thinness, and bulimia.

Table 4. Student by Friend Intercorrelations of Study 2 Variables

<table>
<thead>
<tr>
<th>Students' Ratings</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-objectification</td>
<td>.19</td>
<td>.12</td>
<td>.11</td>
<td>.05</td>
<td>.12</td>
<td>.08</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>2. Fat talk</td>
<td>.12</td>
<td>.27</td>
<td>.08</td>
<td>.14</td>
<td>.19</td>
<td>.05</td>
<td>.18</td>
<td>.06</td>
</tr>
<tr>
<td>3. Old talk</td>
<td>.11</td>
<td>.08</td>
<td>.13</td>
<td>-.04</td>
<td>.07</td>
<td>.03</td>
<td>.00</td>
<td>.06</td>
</tr>
<tr>
<td>4. Body dissatisfaction</td>
<td>.05</td>
<td>.14</td>
<td>-.04</td>
<td>.00</td>
<td>.09</td>
<td>.03</td>
<td>.05</td>
<td>.11</td>
</tr>
<tr>
<td>5. Drive for thinness</td>
<td>.13</td>
<td>.18</td>
<td>.06</td>
<td>.08</td>
<td>.14</td>
<td>.07</td>
<td>.11</td>
<td>.13</td>
</tr>
<tr>
<td>6. Depression</td>
<td>.08</td>
<td>.05</td>
<td>.03</td>
<td>.03</td>
<td>.08</td>
<td>.13</td>
<td>.07</td>
<td>.09</td>
</tr>
<tr>
<td>7. Bulimia</td>
<td>.01</td>
<td>.18</td>
<td>.00</td>
<td>.05</td>
<td>.12</td>
<td>.07</td>
<td>.15</td>
<td>.11</td>
</tr>
<tr>
<td>8. Dieting</td>
<td>.09</td>
<td>.06</td>
<td>.06</td>
<td>.11</td>
<td>.11</td>
<td>.09</td>
<td>.11</td>
<td>.32</td>
</tr>
<tr>
<td>9. Exercise</td>
<td>.07</td>
<td>-.02</td>
<td>-.08</td>
<td>-.01</td>
<td>.08</td>
<td>.05</td>
<td>.03</td>
<td>.19</td>
</tr>
<tr>
<td>10. Age</td>
<td>-.11</td>
<td>-.03</td>
<td>.01</td>
<td>.02</td>
<td>-.07</td>
<td>.19</td>
<td>.14</td>
<td>-.11</td>
</tr>
<tr>
<td>11. Body mass index</td>
<td>.08</td>
<td>.00</td>
<td>-.10</td>
<td>.02</td>
<td>.05</td>
<td>.05</td>
<td>-.06</td>
<td>-.01</td>
</tr>
</tbody>
</table>

Note: The diagonal represents the correlation between students' and friends' ratings of the same variable. However, the similarities within the dyads because they take into account the interdependence and nondistinguishability in the dyads.

* p < .05
** p < .01
To test the hypothesized mediated effects, the methodology proposed by Baron and Kenny (1986) and Hayes (2013) was followed in obtaining regression coefficients between the predictor variable and the mediator variable (a path), the mediator and the dependent variable (b path), the predictor variable and the dependent variable controlling for the mediator (c’—direct path), as well as the indirect effect of the predictor on the dependent variable through the mediator (ab path). Because of the nonindependence in the data, multilevel regression analyses were conducted using the MIXED command in SPSS. Multilevel regression coefficients from these analyses were then inputted into Hayes’ (2013) MCMED Macro which calculates a Monte Carlo confidence interval for the indirect effect based on 100,000 replications.

The hypothesis that appearance-related communication mediates the relationship between self-objectification and health was generally supported regarding fat talk, but was only partially supported regarding old talk (see Table 5). Controlling for age and BMI, fat talk significantly mediated the relationship between self-objectification and body dissatisfaction, drive for thinness, bulimia, depression, and diet, but not depression. Old talk significantly mediated the relationship between body dissatisfaction, drive for thinness, and bulimia, but not depression, diet, or exercise. In all cases, self-objectification was positively associated with appearance-related communication, and communication, in turn, was positively related to the health and well-being outcome variables, all of which represent unhealthy cognitions or behaviors.

**Table 5. The Mediating Role of Fat Talk and Old Talk on the Relationship Between Surveillance and Health Outcome Variables: Study 2**

<table>
<thead>
<tr>
<th>Dependent Variable (DV)</th>
<th>Objectification → Talk (a path)</th>
<th>Talk → DV (b path)</th>
<th>Objectification → DV (Direct: c’ path)</th>
<th>Objectification → DV (Indirect: ab path)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fat talk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body dissatisfaction</td>
<td>.26 * (.11)</td>
<td>.30 * (.05)</td>
<td>.51 * (.08)</td>
<td>.43 * (.07)</td>
<td>[.01, .15]</td>
</tr>
<tr>
<td>Drive for thinness</td>
<td>.26 * (.11)</td>
<td>.48 * (.06)</td>
<td>.80 * (.10)</td>
<td>.69 * (.09)</td>
<td>[.001, .06]</td>
</tr>
<tr>
<td>Bulimia</td>
<td>.26 * (.11)</td>
<td>.31 * (.05)</td>
<td>.32 * (.09)</td>
<td>.24 * (.08)</td>
<td>[.02, .24]</td>
</tr>
<tr>
<td>Depression</td>
<td>.26 * (.11)</td>
<td>.10 * (.03)</td>
<td>.19 * (.06)</td>
<td>.17 * (.06)</td>
<td>[.001, .06]</td>
</tr>
<tr>
<td>Diet</td>
<td>.26 * (.11)</td>
<td>.06 * (.06)</td>
<td>.33 * (.10)</td>
<td>.29 * (.10)</td>
<td>[.002, .10]</td>
</tr>
<tr>
<td>Exercise</td>
<td>.26 * (.11)</td>
<td>.07 (.08)</td>
<td>.18 (.12)</td>
<td>.16 (.12)</td>
<td>[−.02, .07]</td>
</tr>
<tr>
<td>Old Talk</td>
<td>Body dissatisfaction</td>
<td>Drive for thinness</td>
<td>Bulimia</td>
<td>Depression</td>
<td>Diet</td>
</tr>
<tr>
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<tr>
<td></td>
<td>.19 (.09)</td>
<td>.19 (.09)</td>
<td>.19 (.09)</td>
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<td>.19 (.09)</td>
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<tr>
<td></td>
<td>.29 (.06)</td>
<td>.28 (.08)</td>
<td>.26 (.07)</td>
<td>.07 (.05)</td>
<td>.09 (.08)</td>
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<tr>
<td></td>
<td>.51 (.08)</td>
<td>.80 (.10)</td>
<td>.32 (.09)</td>
<td>.19 (.06)</td>
<td>.33 (.10)</td>
</tr>
<tr>
<td></td>
<td>.46 (.07)</td>
<td>.76 (.10)</td>
<td>.27 (.09)</td>
<td>.18 (.06)</td>
<td>.32 (.10)</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Note: Coefficients are unstandardized multilevel regression coefficients (and standard errors) from the Mixed command in SPSS. Statistically significant confidence intervals (CI) indicate that the indirect effect differs significantly from zero, and hence that there is statistically significant mediation. Body mass index and age were used as covariates in each of the analyses.

* $p < .05$.

**Discussion**

Western societies emphasize a narrow definition of women's physical attractiveness: being thin and young. Fredrickson and Roberts' (1997) objectification theory states that the objectification of women's bodies in the media and social interactions adversely affects women's well-being, wherein women tend to accept observers' perspectives of their bodies and treat their bodies as objects that should be evaluated by themselves and others.

The present research sought to identify appearance-related communication as a mechanism by which self-objectification is associated with health and well-being outcomes, as fat talk and old talk were predicted to be behavioral manifestations of the internal experience of self-objectification. In the two studies presented, fat talk mediated the relationship between self-objectification and most health and well-being variables.

Extending these findings to incorporate old talk, the second study found that old talk mediated the relationship between self-objectification and body dissatisfaction, bulimia, and drive for thinness. This section will discuss the theoretical contributions of this work, as well as further discuss the similarities and differences between fat talk and old talk.

The current research shows that expressing appearance-related concerns is important in terms of women's health and well-being. Specifically, communication is negatively associated with health and...
well-being, likely because verbalizing body image concerns increases the salience of weight, emphasizes negative outcomes, and de-emphasizes personal control. Such findings are supported by self-perception theory (Bem, 1972), which asserts that people's attitudes develop after observing their own behavior, including communication.

Accordingly, women who engage in appearance-related communication are more likely to have poorer body image and engage in appearance management strategies given the negative self-referential nature of this talk. Further, research on rumination and corumination and response styles theory (Nolen-Hoeksema, 1991) explains that the enactment of these behaviors prolongs and promotes subsequent negative outcomes because women are not actively combating negative self-images, negating the problematic talk, or effecting a solution to body dissatisfaction; rather, they are encouraging, normalizing, and accepting self-disparaging communication.

Self-objectification is a self-conscious process in which women treat and evaluate their bodies as objects. Researchers have suggested that appearance-related communication is a behavioral manifestation of self-objectification (e.g., Arroyo & Harwood, 2012) and have also connected it to self-objectification (e.g., Becker et al., 2013), but have not utilized objectification theory as the basis for why appearance-related communication is associated with women's health.

In doing so, this research predicted that higher levels of self-objectification are associated with verbalizing negative evaluations of oneself because interpersonal conversations about one's appearance often feature self-objectification (e.g., self-criticism). We found support for these claims, replicated previous effects, and extended the findings to both weight- and age-related communication.

Although objectification theory has heuristic provocativeness and its tenets have generally received support (Moradi & Huang, 2008), a review of the theory suggests that there needs to be "a conceptual shift" in understanding objectification and self-objectification (Moradi, 2010, p. 146); Moradi (2011) proposes that "a useful conceptual shift may be to consider self-objectification as a process rather than as a specific variable to be measured" (p. 157).

The current study's approach aligned with this recommendation. Specifically, it was proposed that communication plays a role in the development of the health-related outcomes outlined by objectification theory. Understanding objectification as a process, particularly as part of the communication process, will push researchers to explore theoretical avenues in which communication is associated with body image and health outcomes.

The current research also draws attention to the similarities and differences among fat talk and old talk. Becker et al. (2013) found that although fat talk and old talk are related, they are not identical. Study 2 also found this association, as a modest association between fat talk and old talk was found for both students and their friends. Further, the fact that both fat talk and old talk were found to show similar significant effects shows that they are related phenomena with regard to health and well-being outcomes.

Arroyo and Harwood (2014) suggest the term "body talk" as a general term for talk about all areas of body concern (e.g., weight, skin, hair, etc.). They present a model of the determinants and consequences of fat talk, which is positioned in the context of sociocultural pressure and objectification. This all-encompassing term may aid in the understanding of appearance-related communication; that is, when applying objectification theory to fat talk and old talk, it makes sense that people's bodies are
Appearance-related communication mediates the link between self-objectification and health and well-being outcomes. The point of concern and specific topics of concern are used to express body perception problems. With self-objectification at its basis, appearance-related messages, whether sent or received, perpetuate sociocultural pressures and foster unrealistic expectations of the ideal body image.

That said, weight and age do not directly parallel one another. Results from Study 2 indicate that the effects for fat talk were more robust; fat talk and old talk were both related to self-perception and mental health variables, but exercise and diet behaviors (which are directly associated with weight) were not significant in the old talk models. The robust findings for fat talk are partly attributable to the young age of the sample, but they may also be a product of the different anxieties and stereotypes associated with aging. Age carries specific anxieties beyond appearance-related concerns.

Aging is associated with the fear of death (Martens et al., 2005), fear of loss and bereavement (Lasher & Faulkender, 1993), and as people age, they also develop fears concerning mental function and decline (French, Floyd, Wilkins, & Osato, 2012). Aging is also associated with more existential anxieties, as people attempt to come to terms with the meaning of their lives, their accomplishments, and their relationships; such concerns are often manifested in communication (Coupland, Coupland, Giles, Henwood, & Wiemann, 1988).

Beyond anxieties, weight and age differ in terms of their underlying continua and their broader social structures. The process of aging is chronologically inevitable—each year everyone becomes one year older. Movement along the age continuum is unidirectional and its pace is stable (albeit, its subjective experience and physical manifestations may not be as constant). Movement along the weight continuum is bidirectional, exhibits more interindividual variation, and, at least in terms of perception, is more under individual control.

Additionally, stereotypes of older people and overweight people vary in terms of their specific content. Perceptions of old people's incompetence do not match stereotypes of fat people's laziness, resulting in unique intergroup emotions toward the different groups (e.g., pity vs. disgust: Fiske, Cuddy, Glick, & Xu, 2002). Nonetheless, on balance, the categorical bases of age and weight are substantially more similar than those of other category systems (e.g., gender, race).

Limitations and future directions

The limitations inherent in this investigation are important to consider when interpreting the findings. Because of the cross-sectional nature of the data, causal claims cannot be made; we have explored what we believe to be the most sensible theoretical model, but other models are plausible. The participants were also homogenous in terms of race/ethnicity, age, and educational attainment because they were university students. A more diverse age range would be especially helpful in terms of understanding old talk. Fat talk and old talk may sound different among older women, and the effects on health and well-being outcomes may be more or less dramatic compared to younger women.

Moreover, although data were only collected from females because of the prevalence of fat talk and old talk among women and the amount of images that objectify women's bodies (Aubrey, 2006; Aubrey et al., 2009), there is increasing evidence of body dissatisfaction issues in males so it would be interesting to explore the current model among males (Grieve & Helmick, 2008; Wiseman & Moradi, 2010). Appearance and communication expectations across the lifespan are different for...
men and women, thus comments about what is ideal will differ based on gender and the outcomes of such talk might differ as well. Further, all variables were measured by self-report, thus the research may suffer from issues related to common method variance (e.g., Spector, 2006).

These limitations suggest future directions. Future research would benefit from incorporating mediated and interpersonal forms of communication in this arena, as appearance-related communication is “one of the micro-level processes that sustain the broader societal discourse about weight” (Arroyo & Harwood, 2012, p. 182). The media are aggressive purveyors of objectification and sociocultural norms in regard to women's bodies (Fredrickson & Roberts, 1997), thus it would be valuable to explore how systematic, repetitive patterns of ideal body representations presented in the media contribute to such interpersonal behavior, as well as whether the media model or stimulate certain types of talk (e.g., envy: “She's so beautiful, I wish I looked like her”).

Additionally, as previously mentioned, Arroyo and Harwood (2014) suggested “body talk” as a useful construct in this area. With the body at the core of objectification and therefore women's concerns, research exploring the similarities and differences between specific appearance-related concerns (e.g., fat talk) and general concerns (i.e., body talk) may yield interesting results in terms of understanding the motivations for these comments, their role in perpetuating sociocultural pressures and fostering unreal expectations of the ideal body image, and strategies for mitigating such negative effects. Lastly, because we did not observe actual talk, analyses of actual talk would enhance our understanding of body talk and its consequences for health and well-being.

**Conclusion**

The current research identified appearance-related communication as a mediator between self-objectification and body dissatisfaction, drive for thinness, bulimia, depression, self-esteem, diet, and exercise. Much of the work in this area has not tested theoretical propositions for the effects of this type of talk, thus objectification theory was employed as a guiding framework. Objectification theory is an appropriate theory in this context, given the self-evaluative and objectifying nature of fat talk and old talk. The findings suggest that by engaging in fat talk and old talk, women are not only maintaining society's objectification of their bodies, but also reinforcing and developing a shared meaning of idealized and unattainable beauty for one another and, thus, constructing poor health and well-being outcomes for themselves.

**Note**

1 Alternative causal models were tested and compared to our hypothesized model (e.g., health and well-being variables → appearance-related communication → self-objectification). Because the tests of mediation conducted in PROCESS and MLM have no associated model fit statistics, we estimated an effect size for the indirect effect for each model (i.e., kappa squared \( k^2 \) for Study 1 and \( \beta \) for Study 2). These data are not presented because (a) this method has a low probability of definitively supporting one model over the other and because (b) the results indeed do not support any particular ordering of variables.