The Effects of Yoga on Self-Objectification

Objectification theory postulates that women exist in a cultural milieu of sexual messages that serves to socialize women and girls to view themselves as objects to be examined by others (Fredrickson & Roberts, 1997). As a result girls and women internalize an observer’s perspective of themselves, concentrating on how they look at the expense of being aware of how they feel, an effect termed self-objectification. The present study investigated whether yoga can reduce self-objectification. Yoga is a mind-body exercise which emphasizes awareness of internal states at the expense of awareness of outward appearance. A certified Kundalini instructor taught yoga classes to adolescent participants. Participants completed self-objectification measures before and after their yoga classes. Overall, results were promising and provided limited support for the hypothesis that yoga instruction can reduce self-objectification. Implications for future research on yoga interventions for self-objectification are discussed.

Yoga as an Intervention for Self-Objectification
Self-objectification means that individuals think about and value their own body more from a third-person perspective, focusing on observable body attributes (e.g., “How do I look?”), rather than from a first-person perspective, focusing on privileged, or nonobservable body attributes (e.g., “What am I capable of?” or “What do I feel?”; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998, p. 270).

Objectification
Objectification theory, as developed by Fredrickson and Roberts (1997), postulates that Western culture’s background of sexual objectification serves to, at some level, socialize girls and women to treat themselves as objects to be viewed and appraised by others. The extent to which individuals internalize an observer’s perspective of their bodies does differ, with women self-objectifying more than men (Fredrickson et al., 1998), which may help explain the excessive occurrence of unipolar depression, sexual dysfunction, and eating disorders among women (Fredrickson & Roberts, 1997).

Self-objectification in women develops at puberty (Roberts & Waters, 2004). During early adolescence young women accumulate fat on their hips and thighs, developing what is scientifically known as a gynoid fat distribution, or more simply, a figure (Fredrickson & Roberts, 1997). In Western cultures, thelarche, the beginning of the development of breasts, occurs around 11 years of age (Ellis, 2004). With this developing figure most girls move further from the ideal female form depicted in the media, which may account for the feelings of shame and disgust experienced by some girls during this transition (Muehlenkamp & Saris-Baglama, 2002). It is during this period of physical change that girls’ bodies become “public domain” (Fredrickson & Roberts, 1997, p. 193), receiving increased sexual attention, evaluation and commentary from others (Roberts & Waters, 2004).

Far from a form of vanity, self-objectification serves as a survival tactic for girls and women (Fredrickson et al., 1998). Self-objectification, like all survival tactics, has its benefits. Women deemed attractive are more socially mobile, popular, have better dating experiences and are less likely to suffer job discrimination (Fredrickson & Roberts, 1997). However, the benefits of self-objectification are not without their costs. Self-objectification contributes to: body shame (Fredrickson & Roberts, 1997); eating disorders (Slater & Tigge-
mann, 2002); limited motor performance as measured by throws of a softball (Fredrickson & Harrison, 2005); decreased intrinsic motivation and self-efficacy levels (Gapinski, Brownell & LaFrance, 2003); a reduction in awareness of internal states (Fredrickson & Roberts, 1997); and negative body regard, which in turn influences depressive symptoms and self-harm, including risky sexual activities, self-injury, and suicidal ideation (Muchenkamp, Swanson & Brausch, 2005). Also, state self-objectification, the subjective and transitory experience of self-objectification, has been associated with an increase in anxiety (Gapinski, Brownell & LaFrance, 2003) and a decrease in performance on a math task (Fredrickson et al., 1998).

Fredrickson and Roberts (1997) suggest that sports participation and physical activity could protect women and girls from self-objectification. Participation in physical activity has, in fact, been shown to have a number of psychological benefits, including enhanced mood and elevated self-esteem and body satisfaction in many age groups. However, one group which does not seem to experience the positive psychological benefits of physical exercise is young women (Prichard & Tiggesmann, 2005). Parsons and Betz (2001) found that among young women (18 to 20 years old), participation in sports and/or physical activity was associated with body shame, especially among those who participated in more “feminine” sports such as dance team, cheerleading and gymnastics.

One form of exercise which may produce psychological benefits in young women as well as older women is yoga. Yoga is a mind-body exercise in which practitioners seek to unify the mind and body by immersing themselves in the sensations of their bodies (Daubenmier, 2005). Traditional yoga studios do not have mirrors, to encourage an emphasis on internal awareness. Rather than placing importance on attaining a pose, the emphasis in yoga is placed on how the body feels before, during, and after the pose. Daubenmier (2005) found that among women ages 18-87, more hours a week of yoga participation were associated with lower trait self-objectification, as well as greater body awareness, satisfaction, and responsiveness.

**Physiological Response to Yoga**

Kundalini yoga incorporates elements of all yoga practices such as body position, with an emphasis on breathing, mantras, and meditation. Through this combination, Kundalini practitioners are encouraged to unleash the energy of their minds and bodies. Research by Lazar et al. (2000) used a functional MRI (fMRI) to examine the areas of the brain activated by participants during simple Kundalini meditation. Brain areas such as the frontal and parietal cortices, as well as areas implicated in arousal/autonomic control (i.e., the amygdala, midbrain and hypothalamus) were activated during meditation (Lazar et al., 2000). The parietal cortex is a brain area involved in processing bodily sensations, while the autonomic nervous system is important for experiencing emotional states. The activation of these brain areas during Kundalini meditation is antithetical to the process of self-objectifying; during meditation one’s attention is internally focused whereas self-objectification is externally focused.

**Changes in Adolescence**

Adolescence is a time of great change. Many of these changes are physiological in nature, such as continued prefrontal cortex development (Casey, Getz, & Galvan, 2008) and the onset of rhythmic hypothalamic activity which generates the menstrual cycle by regulating luteinizing hormone and follicle stimulating hormone. This increase in luteinizing and follicle stimulating hormones has in turn been associated with the onset of adolescent behaviors, sexual motivation, and even behavioral disorders (including anorexia nervosa; Plant & Shahab, 2002). It is, in fact, directly following menarche (the onset of menstruation) when the higher incidence of depression in females (as compared to males) and the increase in negative body image is first detected (Benjet & Hernandez-Guzman, 2001).

Adolescence may be particularly troubling for girls as it is also the time when the negative consequences of self-objectification are first seen in young women (Fredrickson & Roberts, 1997). It is important to develop interventions to decrease self-objectification in this vulnerable population. Participation in yoga could serve to protect adolescent girls from internalizing an observer’s perspective and therefore, the negative repercussions of self-objectification.

The current study examined the effects of Kundalini yoga on self-objectification in adolescent girls. A certified Kundalini yoga instructor was recruited from the community to teach weekly yoga classes for adolescent girls. It was hypothesized that yoga instruction would reduce state self-objectification at the end of each yoga session and trait self-objectification at the end of the 6 week intervention.

**Method**

**Participants**

Participants were recruited from a local Boys and Girls Club (Anchorage, Alaska). In order to be eligible for the study, participants had to be adolescent girls between the ages of 9 and 15. Girls \( N = 8 \) ranging in age from 9-11 participated; 50% of the sample was Black, 25% Hispanic, and 25% White. Informed consent was obtained from the parents of the partici-
pants and assent was obtained from the participants themselves.

To help in recruiting participants and to increase participant motivation, participants were allowed to choose a free T-shirt from Emotional Armor® for their participation. Emotional Armor® is a company that specializes in clothing with empowering messages (e.g., never underestimate me). The T-shirts were given to the participants at the completion of the study. Participants were also given a yoga mat, which they used during the intervention and were allowed to keep following completion of the yoga intervention.

Materials
Trait self-objectification. A modified version of the ten-item Self-Objectification Questionnaire (SOQ) was used to measure trait self-objectification (Fredrickson et al., 1998). Modifications were made to the SOQ such that the language was appropriate for the anticipated reading level of the participants. Participants used a Likert-type scale (Very Important to Not At All Important) to indicate how important each of 11 body attributes were to them. The attributes include physical skill, being healthy, how much you weigh, being strong, looking good to boys, being pretty, having a lot of energy, firm muscles, being physically fit, clothing size, and looking good to girls. Six of these attributes were appearance-based (e.g., “How important is it to be pretty?”), and five attributes were competence-based (e.g., “How important is it to be healthy?”).

State self-objectification. As used in Fredrickson et al. (1998), participants were administered a modified version of the Twenty Statements Test (TST; Bugental & Zelen, 1950) to measure state self-objectification. However, due to the age of the participants the test was shortened to 10 statements. Participants were instructed to, “Please think about how you feel about yourself and who you are.” They were then given the stem, “I am ______” ten times and asked to complete the stem.

Procedure
The current study recruited a certified Kundalini yoga instructor from the community to teach adolescent girls yoga. Participants completed six weekly yoga sessions. All participants answered a modified version of the SOQ (Noll & Fredrickson, 1998) before and after their 6-week yoga intervention to establish trait self-objectification. They also completed a modified version of the TST before and after each 60-minute weekly yoga class to assess state self-objectification (Fredrickson et al., 1998).

State self-objectification data was analyzed such that if participants missed a session, the next session they attended was analyzed in its place. For example, if a participant missed sessions two and five, the analysis included their scores for sessions one, three, four, and six. Due to participants missing classes, only four weeks of state self-objectification data were analyzable for the full set of participants. The participants’ responses were coded by two independent blind coders using Fredrickson and colleagues’ (1998) coding system that classifies responses into six categories: body shape and size, other physical appearance, physical competence, traits or abilities, states or emotions, and uncodable. Participants’ responses categorized as “body shape and size” and as “other physical appearance” were counted as self-objectifying statements. Inter-rater reliability was .90 as measured by percent agreement. State self-objectification scores consisted of the percentages of self-objectifying statements made by participants.

Results
State self-objectification scores were right-skewed. Therefore, a square root transformation was utilized to

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<th>SESSION</th>
<th>PRETEST</th>
<th>POSTTEST</th>
<th>OVERALL</th>
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<td>M (SD)</td>
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<tr>
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<td>15.2 (4.7)</td>
<td>9.4 (9.4)</td>
<td>12.3 (6.2)</td>
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<tr>
<td>Session 2</td>
<td>12.1 (10.1)</td>
<td>10.1 (4.8)</td>
<td>11.1 (6.8)</td>
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<td>7.5 (7.1)</td>
<td>11.3 (6.4)</td>
<td>9.4 (6.2)</td>
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<td>13.7 (7.9)</td>
<td>11.9 (14.1)</td>
<td>12.8 (10.1)</td>
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<tr>
<td>Overall</td>
<td>12.1 (5.6)</td>
<td>10.7 (4.8)</td>
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normalize state self-objectification data. The data were then analyzed using a repeated measures (Test X Week) analysis of variance (ANOVA). There was a marginally statistically significant decrease in state self-objectification between pretest (before each yoga session) and posttest (after each yoga session) when averaging across all four sessions, \( F(1, 7) = 3.96, p = .09 \). Averaging across pretest and posttest, there was no significant change in the percentages of self-objectifying statements made by participants over the four weekly sessions, \( F(3, 21) = .25, p = .86 \). There was a marginally statistically significant interaction between test and week, \( F(3, 21) = 2.54, p = .08 \); self-objectification scores decreased most dramatically from pretest to posttest during the first week and remained relatively stable from pretest to posttest during the remaining weeks. The untransformed means, standard deviations, effect size, and significance level for the effect of yoga on state self-objectification scores are presented in Table 1.

Using a paired samples t-test, there was no significant difference between trait self-objectification scores before and after the 6-week yoga intervention \( t(7) = .68, p = .52 \). Kundalini yoga appears to have been more effective at reducing state rather than trait self-objectification.

Discussion

The results of the current study provide limited support for the hypothesis that participation in yoga could serve to protect adolescent girls from the negative repercussions of self-objectification. However, decreases in state self-objectification scores did not reach conventional statistical significance, due to small sample size which resulted in limited power (i.e., observed power = .40) to test the effects of the intervention. Using generalized eta squared as described by Bakeman (2005), the effect size of the yoga intervention was calculated to be .02. Generalized eta squared is a conservative effect size estimate as compared with the partial eta squared reported by many statistical packages, and is especially appropriate for repeated measures analyses as it allows for comparisons with between-subjects designs (Bakeman, 2005). An effect size of .02 is considered to be small, adding to the problem of low power. However, when sufficient participants for high power cannot be recruited in a study, accepting an alpha level of .10 is a sensible alternative (Keppel, 1991). Therefore, the present results indicate that yoga could serve as propitious intervention for reducing self-objectification.

Also, the effects of yoga on self-objectification may be particularly striking at the beginning of the intervention. In the current study there was a drop in state self-objectification immediately after the first session. In fact, the percentage of self-objectifying statements after the first yoga session was almost 40% lower than the percentage before the first yoga session. These results are promising and suggest that yoga could have immediate benefits after the first session. This lends support to previous findings suggesting that yoga reduces self-objectification (Daubenmier, 2005).

A state of self-objectification may diminish attentional resources, by focusing one’s attention on one’s appearance (Quinn, Kallen, Twenge, & Fredrickson, 2006). Conversely, yoga participation encourages a sensory awareness of internal sensations rather than external appearance (Boudette, 2006). Participation in an initial yoga session may produce an immediate response in participants, which increases sensory awareness of internal states, resulting in a corresponding decrease in self-objectification.

Achieving conventional statistical significance was also complicated by a floor effect; the range of percentages of self-objectifying statements (i.e., state self-objectification) was 0-30%, with an average of 9.85%. This left participants with little room to decrease in state self-objectification. One potential explanation for the apparently low self-objectification in this sample is the race of the participants. Half were Black; African American women have experienced a history of racial prejudice which may incline them to shun the dominant culture’s appraisal of beauty, therefore insulating them from the barrage of sexually objectifying messages which exist in the dominant culture (Fredrickson & Roberts, 1997). Nevertheless, taking all of the current limitations into consideration, the results of this study are promising.

When an individual self-objectifies, his or her mental resources are focused on awareness of their outward appearance; monitoring one’s outward appearance results in “reduced opportunities for rewarding ‘flow’ experiences … and diminished awareness of internal bodily states” (Fredrickson et al., 1998, p. 270). Participants in traditional yoga classes are encouraged to become, “aware of the body for how it feels, rather than how it looks,” focusing mental resources on the bodily sensations experienced during their yoga participation (Boudette, 2006, p. 168). Due to the limited nature of mental resources, the emphasis placed on processing bodily sensations during traditional yoga practice may make participation in traditional yoga antithetical to the process of self-objectifying (Baumeister, Bratslavsky, Muraven, & Tice, 1998).

Self-objectification is detrimental to girls and women of all ages (Slater & Tiggemann, 2002; Muhlenkamp & Saris-Baglama, 2002; Fredrickson et al., 1998). Although the negative consequences of self-objectification emerge in adolescence, it is theorized that all women possessing a reproductively mature
female body experience the oppression of self-objectification (Fredrickson & Roberts, 1997). As a form of oppression self-objectification works by simultaneously increasing a woman’s propensity for body shame (Fredrickson & Roberts, 1997), and eating disorders (Slater & Tiggemann, 2002) while decreasing her intrinsic motivation (Gapinski, Brownell & LaFrance, 2003) and reducing her awareness of her internal states (Fredrickson & Roberts, 1997). Due to the insidiously detrimental effect of self-objectification on women of all ages, and the promising nature of the current research, it is important that future research continues to examine yoga as an intervention for self-objectification.

As the negative consequences of self-objectification emerge in adolescence, it is imperative that more research be done on ways to combat self-objectification in adolescent female samples. Specifically, future studies should target more at risk samples of adolescent females, i.e., ages 12 years and older. Through participation in yoga, adolescent girls may acquire knowledge of how to focus their attention on their internal processes and bodily sensations instead of their physical appearance. This knowledge could serve to protect adolescent girls from internalizing an observer’s perspective and therefore, the injurious consequences of self-objectification.

References


