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LOYOLA UNIVERSITY CHICAGO

THE MIRROR IS NOT YOU:
OBJECTIFICATION AND EATING DISORDERED BEHAVIORS
IN CLASSICAL AND CONTEMPORARY DANCERS

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

PROGRAM IN APPLIED SOCIAL PSYCHOLOGY

BY

DAVID MATTHEW DOYLE

CHICAGO, ILLINOIS

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To my grandmother, Martha, with all my love

The mirror is not you; the mirror is you looking at yourself.
-- George Balanchine, Former Artistic Director of the New York City Ballet

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CHAPTER ONE

LITERATURE REVIEW

Poor body image (i.e., negative thoughts and feelings about one's own body, often conceptualized as dissatisfaction with one's appearance) has long been considered an important factor in the etiology and maintenance of eating disordered behaviors (Cash & Pruzinsky, 2004). Recently, objectification theory (Fredrickson & Roberts, 1997) proposed the construct of self-objectification as a factor in the development of poor body image among women in Western cultures. While this theory has since been tested with many different groups of individuals diverse in gender, race, and sexual orientation (see Moradi & Huang, 2008, for a review), few studies to date have applied this theory to a group considered to be particularly at risk for body dissatisfaction and eating disordered behaviors—dancers (for exceptions, see Slater & Tiggemann, 2002; Tiggemann & Slater, 2001). Due to the environments in which they train and perform, and the centrality of their bodies to both their careers and their lives, objectification theory is well-suited to explaining body image concerns among dancers. However, training and performance environments are not identical for all dancers. Those who are trained in and perform more contemporary styles (e.g., modern dance and contemporary ballet) tend to be exposed to environments that are less objectifying compared to those who are trained in and perform more classical styles (e.g., classical and neo-classical ballet). Research on

self-objectification among dancers should consider possible differences in exposure to objectifying situations due to differences in dancers' training and repertory styles.

Body Image Disturbance in Western Cultures

The prevalence of eating disorders in the general population is somewhat difficult to accurately gauge, due in part to the stigma associated with this type of disorder. Individuals suffering from eating disorders are likely to feel shame and a desire to conceal their condition, and so are less likely to seek clinical support (e.g., Cachelin, Rebeck, Veisel, & Striegel-Moore, 2001). However, several large-scale studies have provided data that are useful in estimating such rates. Hoek and van Hoeken (2003) estimated the prevalence rate of anorexia nervosa for young females in the United States and Western Europe at .3% (reporting also about a 10:1 ratio for female to male). For bulimia nervosa, the estimated prevalence rate was 1% for young women and about .1% for young men. In addition to these statistics, the prevalence rate for eating disorders not otherwise specified (EDNOS), a third category delineated in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; APA, 1994), has been estimated to be 2.4% among young women (Machado, Machado, Goncalves, & Hoek, 2007). EDNOS cases account for about 60% of those seen in outpatient settings, as compared to 14.5% for anorexia nervosa and 25.5% for bulimia nervosa (Machado et al., 2007). These data suggest that a sizable portion of the population is at risk for developing eating disorders in their lifetimes.

Body image disturbance (specifically, body dissatisfaction), an important component of eating disorders, is prevalent in contemporary U.S. culture. In 1984,

Rodin, Silberstein, and Striegel-Moore coined the phrase “normative discontent” (p. 267) to refer to women’s relationships with their bodies. They posited that U.S. culture promotes a thin ideal that is impossible for the majority of women to attain and stigmatizes women who are overweight, thus leading to a norm of women feeling dissatisfaction and shame regarding their appearance. Since that time, many studies have shown that, on average, women do seem to have an unfavorable view of their own bodies (e.g., Cash & Henry, 1995; Feingold & Mazzella, 1998).

Despite the fact that women seem to suffer more from body image disturbance, men are not immune to its pernicious effects. Especially in the last decade or two, research has revealed that many men in the U.S. are dissatisfied with their bodies (e.g., Corson & Andersen, 2002; Muth & Cash, 1997; Pope et al., 2000), although potentially in different ways than women. Whereas women tend to be more preoccupied with their hips, weight, and skin tone, men are more likely to be concerned with their musculature, hairline, and genitals (Phillips & Diaz, 1997). Body image disturbance is especially heightened for gay men compared to heterosexual men (Beren, Hayden, Wilfrey, & Grilo, 1996; Silberstein, Mishkind, Striegel-Moore, Timko, & Rodin, 1989; Tiggemann, Martins, & Kirkbride, 2007), with gay men sometimes reporting levels of dissatisfaction comparable to heterosexual women (Siever, 1994). Thus, although on average women in the U.S. are more dissatisfied with their bodies than men (Feingold & Mazzella, 1998), men have their own concerns as well.

Body Image Disturbance and Dancers

The world of dance is one in which the body is the key instrument. As such, it falls under constant examination. From class to rehearsal, straight through to performance, there is rarely a lack of bodily evaluation by someone outside of oneself, be they teachers, peers, or audience members. As former New York City Ballet dancer and clinical psychologist Linda Hamilton (1997) wrote, “It is in the realm of classical dance that the discrepancy between the ideal body and reality reaches its zenith” (p. 22).

Keeping these conditions in mind, it should come as no surprise that dancers are considered a high-risk group for the development and maintenance of body image disturbance and eating disordered behaviors (Abraham, 1996a). An abundance of prior research has linked participation in dance (especially ballet) to an increased risk of negative body image outcomes (e.g., Abraham, 1996a; Abraham, 1996b; Bettle, Bettle, Neumarker, & Neumarker, 2001; Brooks-Gunn, Burrow, & Warren, 1988; Pierce & Daleng, 1998; Raval di et al., 2003; Raval di et al., 2006; Ringham et al., 2006).

For example, Ringham et al. (2006) sampled a group of 29 female ballet dancers from a professional ballet company, a pre-professional ballet school, and a university dance conservatory. These women were administered the Structured Clinical Interview for DSM Axis I Disorders, which revealed that fully 83% of the dancers had a lifetime history of some form of eating pathology, with 28% suffering from anorexia nervosa and/or bulimia nervosa, and 55% diagnosed with eating disorders not otherwise specified. Ringham et al. (2006) went on to compare ballet dancers’ scores on the subscales of the Eating Disorder Inventory to archival data from women with no eating pathology as well

as women with anorexia nervosa or bulimia nervosa. They found that ballet dancers' scores on the Drive for Thinness and the Body Dissatisfaction subscales were greater than women not suffering from eating disorders, and not statistically different from women with restricting anorexia nervosa or bulimia nervosa.

Dancers may be so likely to suffer from eating disorders, in part, due to a distorted view of their own bodies. Pierce and Daleng (1998) investigated body image with a group of ten professional female ballet dancers. They assessed actual body fat percentages for these dancers and then administered a nine-figure silhouette scale (see Stunkard, Sorenson, & Schulsinger, 1983). With this scale, participants are shown nine different female silhouettes of human figures varying in body composition from extremely underweight to extremely overweight. The dancers were asked to indicate the figure that best represented their current body and the figure that represented their ideal body. Results showed that the dancers' ideal figures were significantly smaller than their current figures, despite the fact that their current percentages of body fat (as assessed via skinfold techniques) placed them all within the "ideal" category for objective body composition. The authors cited these data as indication that many ballet dancers may suffer from distorted perceptions of their own bodies: although all of the participants had objectively "ideal" bodies, they did not self-evaluate as such. Although this is a plausible explanation, these data are also consistent with the argument that ballet dancers strive for an ideal that is even skinnier than the objective ideal, and may thus be unhealthy and maladaptive.

In terms of actual eating practices, one study of professional female ballet dancers found that over half the sample consumed less than 85% of the recommended daily caloric intake (Hamilton, Brooks-Gunn, & Warren, 1986). Considering the amount of extra calories expended by these women during the day due to their ballet training, rehearsal, and performance, this number probably *overestimates* the percentage of recommended daily calories actually consumed by these women. Furthermore, the researchers found that the heavier women in their sample (who still weighed 4-10% below their clinically recommended ideal weights) tended to consume fewer calories and engage in more dieting than the lighter women (who weighed 11-21% below their clinically recommended ideal weights). This suggests that a drive to maintain an unreasonably thin figure plays an important role in dancers' restrictive eating behaviors.

Apart from the direct consequences of eating disorders for any population, the low body-weight associated with weight control may be especially dangerous for dancers due to the physical intensity of their art form. For example, one study compared the eating behaviors and characteristics of dancers currently suffering from a stress fracture with dancers not currently suffering from a stress fracture as well as non-dancers (Frusztajer, Dhuper, Warren, Brooks-Gunn, & Fox, 1990). They found that dancers currently suffering from a stress fracture weighed significantly less than the other two groups (about 25% less than clinically recommended ideal body weight on average), showed greater eating disorder symptomology, and were more likely to avoid high fat content foods and consume low-calorie substitutes.

Objectification Theory

Objectification theory (Fredrickson & Roberts, 1997) has been posited as one explanation for the heightened concern of women in Western cultures with their bodies. The theory assumes that as girls grow and are socialized in Western societies, they are inevitably exposed to sexual objectification. As Fredrickson and Roberts (1997) stated, “The common thread running through all forms of sexual objectification is the experience of being treated *as a body* (or collection of body parts) valued predominantly for its use to (or consumption by) others” (p. 174). The theory holds that after repeated exposure to such incidents, girls and women begin to internalize this view of their own bodies as objects, characterized as self-objectification, or an outsider’s perspective on one’s own body. In short, as girls and women are repeatedly treated as objects to be looked at and enjoyed by others, they come to see themselves in this same way.

The mark of self-objectification that has often been used in research on the theory is body surveillance, or the extent to which one is preoccupied with monitoring her own appearance and how her body is viewed by others (McKinley & Hyde, 1996). Due in part to the unreasonable standards of beauty promulgated by Western societies, women who frequently monitor their appearances are likely to conclude that they fall short in some way. Consideration of this divide between the actual and ideal body is then likely to cause women to feel shame for not achieving the impossible standard set by society (cf. Higgins, 1987). Therefore, women high in self-objectification are likely to experience greater body shame due to the frequency of cognitions related to their own bodies (McKinley, 1998; McKinley & Hyde, 1996).

In turn, body shame has been linked to various negative body image outcomes, including body dissatisfaction and eating disordered behaviors. Many studies have tested a model of objectification theory in which body shame mediates the relationship between self-objectification and body image disturbance (e.g., Calogero et al., 2005; Kozee & Tylka, 2006; Moradi, Dirks, & Matteson, 2005; Noll & Fredrickson, 1998; see Moradi and Huang, 2008, for a review). As individuals internalize an outsider's perspective on their own bodies, they begin to monitor their appearances more frequently and feel shame for not achieving the culturally prescribed ideal, leading to dissatisfaction and maladaptive attempts to reform appearances, such as through eating disordered behaviors.

Noll and Fredrickson (1998), the first to formally test this model, used two different samples of undergraduate women. They found support for the model in both groups. In the second sample, they found that the proposed mediational model accounted for 51% of the variance in bulimic symptoms, 30% of the variance in anorexic symptoms, and 47% of the variance in dietary restraint. In addition, they also found evidence for a direct relationship between self-objectification and eating disturbance, explaining 4%, 3%, and 5% of the variance, respectively, in bulimic symptoms, anorexic symptoms, and dietary restraint.

The tenets of objectification theory have also been experimentally tested in a number of studies. The first set of studies to do so was conducted by Fredrickson, Roberts, Noll, Quinn, and Twenge (1998). In their first study, women were pre-tested for trait-level self-objectification, and then brought into the lab for a session ostensibly related to emotions and consumer behavior. Women were assigned to either an

experimental condition, in which they were asked to try on and evaluate a swimsuit alone in front of a mirror, or a control condition, in which they were asked to try on a sweater. A body shame measure was embedded within the evaluation questionnaire. After completing this first task, designed to raise the state-level self-objectification of the women in the experimental condition, participants were seated at a table and asked to evaluate a sample of chocolate chip cookies and chocolate-flavored beverages. As a measure of restrained eating, the experimenters covertly measured how much of the food and drink participants consumed. Analyses of the data in this study revealed an interaction between trait and state self-objectification on body shame, such that those women who were higher on self-objectification to begin with and were then assigned to the swimsuit condition reported the greatest body shame. Furthermore, body shame was predictive of restrained eating, with those who reported greater body shame consuming less of the food provided. However, analyses failed to support the hypothesized mediational model as self-objectification did not predict restrained eating.

The second study in the set conducted by Fredrickson et al. (1998) was primarily a replication of the first, but this time they included men in their sample. Similar results to those found in Study 1 were shown with women in Study 2, with self-objectification predicting body shame and body shame, in turn, predicting restrained eating. However, in Study 2 they did not find the same moderating effect of trait self-objectification. So, regardless of trait self-objectification, women who tried on the swimsuit evidenced elevated body shame compared to those who tried on the sweater. Men did not show the

experimental effect of increased body shame in the swimsuit condition, yet initial levels of trait self-objectification were predictive of body shame.

Following up on this work, Hebl, King, and Lin (2004) replicated the methodology of the previous studies, but included women and men of various ethnic backgrounds in their sample. They also noted that the failure of previous work to find an effect of the experimental condition in men may have been due to the difference in swimwear tried on: while women were asked to model a form-fitting garment, men were given a pair of swim trunks, which do not cling to the body in the same way. Therefore, they used Speedos for both groups to equate the conditions. Results from their experiment indicated that all groups (regardless of gender or ethnicity) tended to exhibit greater self-objectification and the resulting body shame in the experimental condition compared to the control condition. There was a significant difference in levels of self-objectification and body shame between men and women, such that women reported higher levels of these variables overall. However, members of both genders showed increases when trying on the swimsuits. Similarly, although individuals from all of the ethnicities tested tended to exhibit elevated body shame and self-objectification when trying on the swimsuits, there was a notable pattern in overall levels; African American individuals reported the lowest levels of these variables and Hispanic individuals reported the greatest. Notably, in this study, the authors failed to replicate the finding of restrained eating in the swimsuit condition demonstrated by Fredrickson et al. (1998). Although potentially problematic for the theory, the authors cited an issue with the candy given to participants for this measure as a potential confound. They used a generic brand of candy

for the taste test and found that their own experience and reports from the participants both suggested that the generic brand did not compare favorably to its name-brand counterpart. Thus, the authors speculated that disappointment and distaste may have created a restricted range for this scale, with no one consuming much of the food to begin with. This would have made group differences in restrained eating difficult to detect.

More recently, Quinn, Kallen, and Kathey (2006) once again replicated this methodology, but with the addition of a free-response writing task given approximately 10 minutes after participants had re-dressed in their street clothes to investigate whether preoccupation with thoughts of the body would persist after removal from the objectifying situation. In this study, their main hypothesis was supported; women in the swimsuit condition listed more body-related thoughts in the free-response task compared to those in the sweater condition, and this relationship between state self-objectification and bodily thoughts was mediated by body shame. However, they did not find the previously reported effect of the swimsuit condition on body shame in men, thus persistence of body-related thoughts was not explored with males in the study.

In another study on the effects of objectification on women, researchers investigated the importance of environmental cues on the impact of an objectifying experience (Tiggemann & Boundy, 2008). Specifically, the researchers brought undergraduate women to the lab and assigned them to either a control environment (i.e., an ordinary lab space) or an objectification-priming environment (i.e., the same lab space with scales, mirrors, and fashion magazines unobtrusively added). Participants were also assigned to a second condition, with some receiving an appearance compliment

embedded in the instructions spoken by the experimenter, meant to heighten their focus on their own bodies and appearance, and others receiving the same instructions without this compliment. Data were analyzed with a 2 X 2 X 2 analysis of variance (ANOVA), with environment, appearance compliment, and trait self-objectification as the three factors. Results revealed a significant environment by trait self-objectification interaction on state self-objectification, with women high in trait self-objectification reporting the greatest levels of state self-objectification after being exposed to the objectification-priming lab. For body shame, the researchers found main effects both of the appearance compliment and trait self-objectification, as well as a compliment by trait self-objectification interaction, but no effects due to environment. In sum, regardless of environmental cues, women whose attention was focused on their appearance by a compliment as well as those high in trait self-objectification reported greater state self-objectification, with women high in trait self-objectification who also received the appearance compliment reporting the greatest levels of body shame of all conditions.

Although much of the research on objectification theory has focused exclusively on heterosexual women (the theory was originally conceived in a feminist framework and was relatively narrowly construed), as noted previously, researchers have also begun to explore how the tenets of objectification theory might affect other groups, including people from diverse ethnic backgrounds, those of different sexual orientations, and men (e.g., Engeln-Maddox, Miller, & Doyle, 2010; Hallsworth, Wade, & Tiggemann, 2005; Hebl, King, & Lin, 2004; Kozee & Tylka, 2006). Although results have been somewhat mixed, with modifications to various paths in the model theorized for heterosexual

women required in some cases (e.g., Engeln-Maddox et al., 2010), these studies have continually shown that the construct of self-objectification has very real and important consequences across lines of gender, race, and sexual orientation.

Self-Objectification and Dancers

The first psychological study to explore self-objectification in dancers was conducted by Tiggemann and Slater (2001). Rather than recruiting current dancers, the researchers utilized a sample of “former dancers” composed of women aged 17 to 25 who had previously studied classical ballet (at the recreational level) for at least two years and no longer did so. These women were compared to a sample of undergraduate women of comparable ages who had never participated in ballet training. Thus, although this study provided important insights into how dance training might impact self-objectification, it did not address these issues among current dancers. In fact, the average age at which former dancers in this sample had ceased training was about 14, suggesting that any effects found had persisted for as much as a decade past participation in dance. Furthermore, the researchers found that body mass index (BMI) did not significantly differ between the former dancer and non-dancer groups (based upon past research, e.g., Brooks-Gunn et al., 1988, differences in BMI between current dancers and non-dancers would almost certainly be found). Despite these limitations, analyses revealed that former dancers scored significantly higher on measures of self-objectification and body surveillance, and disordered eating. The authors argued that although these women had ceased to participate in the dance community quite some time ago, their experiences as young girls and women could have instilled a view of their bodies as objects that

persisted despite cessation of ballet training. This claim is consistent with research showing heightened levels of disordered eating among women who had participated in dance training in childhood (Ackard, Henderson, & Wonderlich, 2004)

In a follow-up study with adolescent girls, Slater and Tiggemann (2002) recruited participants between the ages of 12 and 16 who had never studied dance as well as a group who were currently taking recreational ballet classes at one of three separate ballet schools. For this study, there was a significant difference in BMI between the dancers and non-dancers (due to weight but not height), with dancers reporting lower BMIs on average. Surprisingly, the researchers failed to find significant differences between groups on self-objectification, body surveillance, body shame, or disordered eating. Contrary to their predictions, Slater and Tiggemann (2002) hypothesized that one reason that female adolescent dancers might not show heightened levels of these variables is that adolescence is a time of extreme body pressures for all girls, thus differences based on dance participation may have become difficult to detect. Although this is a plausible contention, referencing the mean scores on measures of self-objectification and body surveillance in these two groups, there was by no means a ceiling effect for either variable. In fact, scores on self-objectification, as assessed by Noll and Fredrickson's (1998) Self-Objectification Questionnaire, revealed that both dancers ($M = -11.27$) and non-dancers ($M = -6.49$) tended to focus more on their bodies' physical competence rather than physical appearance (more negative scores reflect a greater valuation of physical competence attributes compared to physical appearance attributes on a ranking scale).

While to date these two studies are the only psychological studies that have explored the tenets of objectification theory with samples of dancers (with mixed results and support for their hypotheses), there has been a relatively long-standing interest in the effects of objectifying features of the dance training environment within research on dance theory and dance education. Piran (2005), for example, in a discussion of the body in the context of dance, has argued, “The ongoing monitoring of dancers’ bodies as they practice and perform intensifies the objectified experience of the body, and the continual verbal and physical corrections of movements by teachers and choreographers further challenge the experience of body boundaries” (p. 203). Two specific features of the dance training environment that have continually been linked to objectification are the presence of full-length mirrors and the attire dancers are often required to wear. Both of these characteristics of the training environment focus dancers’ attention on their bodies and their outward appearances. While it is necessary for dancers to see themselves clearly in order to make adjustments to their technique and for instructors also to have a clear view of their students’ bodies in order to make critical corrections, this sort of a training environment lends itself to the treatment of dancers as objects to be looked upon and evaluated solely for their appearances.

Green (1999), in a critique of traditional dance instruction, asserted, “The constant focus on an externalized view of the body, as reflected in the mirror, objectifies the dancer’s body and requires students to strive to achieve a specific ‘look’ while being ‘corrected’ so the students perform ‘proper’ dance technique” (p. 81). Similarly, writing about her own experiences as a professional ballet dancer, Karen Kain (1994) expressed,

“As I slunk into the back row, my old insecurities surfaced instantly, for it was always during class that I was most tormented by seeing in the floor-to-ceiling mirror, a dancer’s constant corrector and reference point, how much my body and its way of moving differed from the classical ideal” (p. 27). To test the effects of the presence of mirrors on the body concerns of dancers, Radell, Adame, and Cole (2002) recruited a sample of dancers from two different university ballet classes (both with the same instructor). The critical difference between the groups was that one class was conducted in a room with full-length mirrors (as in a traditional dance studio) while the other class was conducted in a room without mirrors. The researchers collected data about body satisfaction from both groups on the first and last days of classes. At Time 1, no significant differences were found for body satisfaction between the two groups. However, dancers who took class in the room without mirrors for the semester reported greater satisfaction with their bodies at Time 2 compared to Time 1, while dancers who took class in the studio with mirrors evidenced decreased body satisfaction at Time 2 compared to Time 1.

Another environmental factor of dance training (particularly ballet training) that has been identified as potentially having a negative effect on body image outcomes and fostering objectification is traditional dance attire (i.e., tights and leotards for females and tights and close-fitting t-shirts for males). Price and Pettijohn (2006) tested the impact of dance apparel on self-perceptions in a study which varied dancers’ choices of what types of apparel they were allowed to wear (i.e., traditional dance attire or “junk” clothing). Specifically, they recruited female students enrolled in a university ballet class who were in one of two different sections both taught by the same instructor. On one day of

classes, students were required to wear traditional dance attire (standard uniform for these classes). The following day, dancers were allowed their choice of what clothing to wear, leading them to dress in their own “junk” clothing (importantly, the researchers noted that on the “junk” day none of the dancers self-selected clothing that was particularly tight or revealing). For the purpose of ruling out any order effects, the design was counterbalanced between the two sections so that Section A wore traditional attire first and “junk” attire second, while Section B wore “junk” attire first and traditional attire second. Self-perceptions were gauged with a measure created for the study that required participants to state their level of agreement with ten statements concerning, generally, body image and dance ability. As the researchers predicted, participants responded more positively toward both their bodies and their dance abilities on the day they were allowed to wear “junk” attire as opposed to being required to wear traditional ballet attire. No effect of order was found, so regardless of whether the dancers wore “junk” or traditional attire first, they felt better about their bodies and their dancing on days they were allowed to choose their own attire. Although the researchers explained this effect by suggesting that the “junk” attire allowed dancers to focus less on their bodies from an external perspective and worry less about their appearances, they acknowledged that it is plausible that choice itself was responsible for these findings (i.e., dancers may have had a greater sense of self-efficacy on the day they were allowed to choose their own clothing as opposed to being told what to wear).

Providing further support for the contention that form-fitting clothing can negatively impact body image through self-objectification, Prichard and Tiggemann

(2005) found that preferences for wearing different types of clothing to fitness centers were related to self-objectification. Frequency of wearing form-fitting clothing (i.e., gym tops and gym pants) was significantly correlated with higher levels of self-objectification and body surveillance, while frequency of wearing less revealing clothing (i.e., t-shirts) was significantly related to lower levels of self-objectification. Furthermore, this study showed that location of exercise (i.e., inside or outside a fitness center) moderated the relationship between frequency of exercise and self-objectification. For exercise within the fitness center, greater time spent exercising was associated with greater self-objectification. For exercise outside of the fitness center, on the other hand, greater time spent exercising was associated with less self-objectification. Thus, the authors speculated that exercise done in an objectifying environment (e.g., a fitness center) causes an increased focus on the body as an object rather than a tool, whereas the reverse is true for exercise that is done without such cues. This argument could easily be applied to the dance world.

Ballet vs. Modern Dancers

An important issue related to the number of objectification cues apparent in a dancer's environment is the style of dance in which a dancer performs or is trained. There are some major differences between the ways in which dancers' bodies are conceptualized and utilized in contemporary styles (e.g., modern dance and contemporary ballet) and classical styles (e.g., classical and neo-classical ballet). As should be evident at this point, research on dancers tends to be almost exclusively focused on classical ballet dancers; however this decontextualized focus leads to generalizations which may

mask important differences between subtypes of dancers. As Krasnow and Kabbani (1999) noted, “Until the modern dancer receives specific attention, there will be no way to determine the applicability of dance science research to this specialized population” (p. 18).

As noted above, dancers’ bodies are conceptualized and utilized quite differently in contemporary and classical styles. While the classical dancer is more likely to be seen as a prop or object on the stage whose goal is to please the eye and entertain the audience, contemporary dancers’ bodies are often seen as tools that facilitate movement and action. Albright (1997) observed, “Some contemporary choreography focuses the audience’s attention on the highly kinetic physicality of dancing bodies, minimizing the cultural differences between dancers by highlighting their common physical technique and ability to complete the often strenuous movement tasks” (p. 4). From here, she went on to discuss Isadora Duncan, one of the pioneers of modern dance in America. Drawing on theorizing by Daly (1992), she contended, “What made Duncan’s dancing so extraordinary, then, was her ability to share with the audience her experience while moving... In language that parallels much of what I have been arguing, Daly describes Duncan’s dancing body as ‘no longer a product—of training, of narrative, of consumption—but rather a process. The dance was about becoming a self (the subject-in-process/on trial) rather than about displaying a body” (p. 19). Duncan’s impact on modern dance in America (both training and choreography) is still clear today, and thus those who train and perform in this style are likely to benefit from the shift in bodily focus that she initiated. Conversely, despite the wisdom displayed in the quote at the

beginning of this paper, Hamilton (1997) pointed out, “In the 1930s, George Balanchine, my former artistic director, introduced the ultra-thin look to ballet through his neo-classical choreography which streamlined everything from scenery to weight” (p. 23). So, in the worlds of both classical and neo-classical ballet the focus on appearance and shape is still incredibly strong, supported by the extensive research on these populations.

Further supporting the contention that self-objectification may vary between classical and contemporary dancers, the presence of both mirrors and form-fitting clothing also differ for these groups. While mirrors are a staple in classical ballet classes, many modern classes are taught in rooms either without mirrors or with mirrors that are covered by drapes. Even when mirrors are present, modern instructors often tell students not to worry about what a certain movement looks like, but rather what it feels like (Clabaugh & Morling, 2004). Additionally, while tights and leotards for girls and tights and form-fitting t-shirts for boys are traditional attire required by most classical ballet schools and companies, modern dance attire is considerably more diverse and tends to be much less revealing and looser. Although this hypothesis has not yet been explored in research, these differing environmental cues along with the differing foci on the body between classical and contemporary styles are likely to lead to differences in levels of self-objectification between dancers who train and perform in each style.

CHAPTER TWO

METHOD

The purpose of the current study was to clarify disparate findings from the limited research on objectification theory and body image with dancers as well as to investigate the impact of an important and thus far unstudied variable (style of dance) on self-objectification in dancers. As mentioned previously, only two studies have explicitly explored the tenets of objectification theory with dancer samples (Slater & Tiggemann, 2002; Tiggemann & Slater, 2001). These studies offered opposite findings, with Tiggemann and Slater (2001) providing evidence that self-objectification differs between former dancers and non-dancers and Slater and Tiggemann (2002) revealing a null effect. However, both of these studies are limited for a number of reasons, including the samples they utilized. Tiggemann and Slater (2001) recruited former dancers rather than current dancers and Slater and Tiggemann (2002) recruited adolescent dancers (who are still developing their body images) rather than adults. Additionally, both of these samples consisted of individuals involved in recreational dance. While objectification may be a concern for recreational dancers as well, it is likely to be much stronger and clearer among professional dancers who have invested much more of their time and self-concepts in dance. To remedy these issues, only adults who were currently professional

dancers in major companies were recruited for participation in the current study. A comparable group of non-dancers was also recruited to serve as a control.

Another significant innovation of the current study was to include measures of styles of dance in which participants are involved (i.e., classical or contemporary). However, many dancers train in both classical and contemporary styles and many major companies' repertoires include both classical and contemporary choreography. Therefore, rather than simply categorizing participants as either contemporary or classical dancers, multiple measures of both style of training and style of performance were utilized in the current study.

Finally, the current study was also the first to include male dancers in a study of objectification. Past research on objectification theory has exclusively focused on female dancers and even the majority of studies on body image disturbance among dancers have neglected to include male dancers (a significant portion of the population). Although self-objectification may not function identically for men and women, evidence is accumulating to support adjusted models across groups based on gender and sexual orientation (Engeln-Maddox et al., 2010; Hebl et al., 2004).

To summarize, the current study tested three main hypotheses. First, it was predicted that dancers would evidence greater levels of self-objectification and its sequelae (i.e., body surveillance, body shame, and eating disordered behaviors) than non-dancers. Second, it was predicted that support for the general model of self-objectification and the resulting body surveillance leading to eating disordered behaviors (with body shame acting as a mediator) would be found among both dancers and non-

dancers. Finally, the third prediction was that training and performance in classical styles would be correlated with greater self-objectification among dancers, while training and performance in contemporary styles would be correlated with lesser self-objectification.

Procedure

Data collection for this study was achieved through non-probabilistic sampling methodology. Specifically, the author utilized connections within the professional dance community (both contemporary and classical) to locate primary sources. These individuals were then e-mailed a request for their participation in the current study with a link to the survey material set up on *Qualtrics*TM online software. Participants were also requested to pass this e-mail on to their own contacts in the dance world. This snowball sampling method allowed for a broad group of professional dancers to be included.

The control group, composed of non-dancers (each of whom endorsed never having participated in formal dance training) was recruited through two undergraduate psychology courses at a private Midwestern university as well as e-mails to contacts of colleagues engaged in research with sexual minority men (in order to ensure that a comparable number of gay men to the dancer group would be included). Both groups were offered the chance to be entered into a raffle to win a \$100.00 gift card at the conclusion of the study for their participation.

Participants

A total of 79 individuals participated in the current study, with 40 dancers and 39 non-dancers included in the sample. The dancer group was composed of 25 women (all identified as heterosexual) and 15 men (9 identified as gay and 6 identified as

heterosexual). The non-dancer group was composed of 22 women (21 identified as heterosexual and 1 identified as bisexual) and 17 men (7 identified as gay and 10 identified as heterosexual). Across groups, the majority of the participants in the current study identified as Caucasian ($n = 66$). Eight participants identified as Asian and five selected “Other” in response to this item. Participants recruited for the current study resided in California ($n = 2$), District of Columbia ($n = 1$), Florida ($n = 2$), Georgia ($n = 1$), Illinois ($n = 50$), Indiana ($n = 1$), New Jersey ($n = 2$), New York ($n = 7$), Ohio ($n = 2$), and Pennsylvania ($n = 2$). Additionally, six participants resided outside of the continental United States, in Estonia ($n = 1$), Germany ($n = 1$), Israel ($n = 1$), Switzerland ($n = 2$), and the United Kingdom ($n = 1$). Dancers included in the current study all danced for major professional companies (e.g., Joffrey Ballet, San Francisco Ballet, Hubbard Street Dance Company, Martha Graham Dance Company) and had trained, on average, for more than 17 years ($M = 17.44$, $SD = 6.20$).

Measures

The survey consisted dance background information (completed only by dancers and including items related to styles of training and performance) as well as measures of self-objectification, body surveillance, body shame, eating disordered behaviors, and perfectionism. The measure of perfectionism was included in this study due to previous research identifying elevated levels of perfectionism among dancers (e.g., Anshel, 2004) and linking this perfectionism among dancers to eating disordered behaviors (Thomas, Keel, & Heatherton, 2005).

Dance background

Within this section of the survey (completed only by dancers) was a series of questions relating to the styles of dance in which the participants were trained and perform. Dancers were asked to report the name of the company for which they currently danced as well as classify that company according to their own judgment as either primarily classical or primarily contemporary (examples of each style were given to aid these decisions). Next, dancers were asked to rate on two separate 7-point scales how much of their current company's repertory was classical and how much was contemporary (from 1—*none* to 7—*all*). After items related to current company, dancers were asked a series of questions about their training. Similarly to ratings of company repertory, dancers were also asked to rate on two separate 7-point scales how much training they have received in classical and contemporary styles (from 1—*not much* to 7—*a lot*). Dancers also indicated how many years they had trained in each style as well as what style they primarily identified themselves as, either classical or contemporary dancers. Finally, dancers were also asked to report on three different aspects of the training/rehearsal environment that could be considered cues of objectification: the presence of mirrors, the requirement of form-fitting attire, and corrections based upon the appearance rather than feeling of a movement. For each item, dancers were asked to report the relative presence on a scale from 1 to 7, with greater scores indicating a greater presence of objectifying cues in the environment. Scores were averaged across these three items. Although the internal consistency of this new measure was somewhat below the desired level ($\alpha = .59$), combined scores were used due to the theoretical importance

of each of these different facets of the training environment in predicting self-objectification among dancers. Furthermore, removing any of the three items from the overall score was not found to improve the internal consistency.

Self-objectification

Self-objectification was assessed with a modified version of the Self-Objectification Questionnaire by Noll and Fredrickson (1998). The original version of this measure asks participants to rank 12 different body attributes in order of their importance to their self-concept. Six of the items listed are categorized as related to physical competence (physical coordination, muscular strength, stamina, health, physical fitness, and energy level), while the other six are categorized as related to physical appearance (physical attractiveness, coloring, sex appeal, measurements, weight, and muscle tone). Original scoring for this measure was done by subtracting the sum of physical appearance item rankings from the sum of physical competence item rankings. However, participants frequently complete this measure incorrectly. Mistakes can range from simply checking attributes considered important to reversing the order of rankings to repeating rankings for multiple attributes. Because of these concerns, researchers (Johnston-Robledo & Fred, 2008) have recently begun utilizing this same measure but switching response scales from rankings to 7-point scales for each attribute, asking how important or unimportant each attribute is to the self-concept (from 1—*unimportant* to 7—*important*). The same method for scoring is used, subtracting the sum of physical appearance items from the sum of physical competence items. Therefore, possible scores on this scale range from -35 (reflecting greater valuation of physical competence) to 35

(reflecting greater valuation of physical appearance). Because of the new scoring methodology employed, we were able to compute internal consistencies for both subscales, with both the appearance subscale ($\alpha = .70$) and competence subscale ($\alpha = .85$) showing good reliability in the current study.

Body surveillance

The Objectified Body Consciousness Scale (OBCS; McKinley & Hyde, 1996) contains a body surveillance subscale which was used in the current study. The subscale, meant to capture the degree to which individuals consider their bodies from an external perspective, consists of 8 items asking participants to rate their level of agreement on a 6-point scale from 1 (*strongly agree*) to 6 (*strongly disagree*). A sample item from this subscale is, “I rarely worry about how I look to other people” (reverse scored). Possible scores for body surveillance range from 1 to 8, with higher scores reflecting greater levels of body surveillance. Reported internal consistencies for this subscale have been strong, ranging from .76 to .89. Additionally, McKinley and Hyde (1996) have shown a test-retest reliability of .79 for this measure. In the current study, the scale evidenced strong internal consistency ($\alpha = .84$).

Body shame

Body shame was assessed with a second subscale from the OBCS (McKinley & Hyde, 1996). The body shame subscale also consists of 8 items which are rated on a 6-point scale from 1 (*strongly agree*) to 6 (*strongly disagree*). Body shame items are related to individuals’ feelings that they fall short of society’s ideal image. “I feel ashamed of myself when I haven’t made my best effort to look my best,” is a sample item

from the body shame subscale. Possible scores, like body surveillance, range from 1 to 8, with higher scores reflecting greater body shame. Also identical to the body surveillance subscale, the body shame subscale has been shown to have a test-retest reliability of .79 (McKinley & Hyde, 1996). Reported reliabilities have also been strong, ranging from .70 to .84. In the current study, the scale evidenced strong internal consistency ($\alpha = .83$).

Eating disordered behaviors

The scale used to measure the primary outcome variable for this study, eating disordered behaviors, was the Eating Attitudes Test (EAT-26) by Garner and Garfinkel (1979). This scale consists of 26 items related to eating thoughts and behaviors and body image. Three subscales have been identified as dieting (13 items), bulimia and food preoccupation (6 items), and oral control (7 items). The dieting subscale contains items such as, "I eat diet foods," the bulimia and food preoccupation subscale contains items such as, "I have gone on eating binges where I feel that I am unable to stop," and the oral control subscale contains items such as, "I display self-control around foods." Participants are asked to respond to statements on a 6-point scale, ranging from *never* to *always*, with *rarely*, *sometimes*, *often*, and *usually* marking, sequentially, the points in between. In the original scoring system, scoring for this scale is achieved by assigning three points to items marked *always*, two points to items marked *usually*, one point to items marked *often*, and no points for *sometimes*, *rarely*, or *never* (see Garner and Garfinkel, 1979). In the current study, rather than assigning points for extreme scores on this measure, continuous scores were computed with a point for each division of the scale such that higher scores are indicative of greater eating disordered behaviors. This

measure of eating disordered behaviors is commonly used and has been well-validated, with alphas ranging from .83 to .90 having been reported in studies utilizing continuous scoring (Garner, Olmsted, Bohr, & Garfinkel, 1982). In the current study, Cronbach's alpha for the EAT was found to be high (.92).

Perfectionism

As stated previously, perfectionism was investigated as a covariate in the current study. Perfectionism was measured with the perfectionism subscale of the Eating Disorders Inventory-II (EDI-II; Garner, 1991). This subscale, consisting of six items, gauges individuals' beliefs that only the highest personal and societal standards of performance are acceptable. Items from this subscale include, "I hate being less than best at things." Participants are asked to rate how much each statement applies to them on a 6-point scale ranging from 1 (*never*) to 6 (*always*). Past research with this scale has demonstrated good internal consistency (alphas between .87 and .95; Garner, 1991) and test-retest reliability (.68; Joiner & Schmidt, 1995). The internal consistency of this scale was found to be strong in the current study ($\alpha = .81$).

CHAPTER THREE

RESULTS

To begin with, dancers and non-dancers were compared on age, BMI, and perfectionism. While BMI was significantly lesser for dancers ($M = 19.75$, $SD = 2.05$) in the current sample compared to non-dancers ($M = 21.18$, $SD = 2.82$), $t(75) = -2.54$, $p = .01$, dancers were also older ($M = 27.48$, $SD = 5.65$) than non-dancers ($M = 21.95$, $SD = 3.46$) by about five and a half years, $t(77) = 5.22$, $p < .001$. Thus, both age and BMI were controlled for in all of the following analyses. Perfectionism did not significantly differ between dancers ($M = 4.49$, $SD = 1.08$) and non-dancers ($M = 4.20$, $SD = 1.02$), $t(68) = 1.14$, $p = .26$, so it was not included as a covariate in any of the following analyses.

Next, comparisons were made between the two groups on the variables of interest in the current study: self-objectification, body surveillance, body shame, and eating disordered behaviors. Means and standard deviations on these measures for each group (i.e., dancers and non-dancers) are presented in Table 1. Analyses of covariance (ANCOVA) were conducted to test for significant differences, with age and BMI entered as covariates. Contrary to predictions, dancers scored significantly lower on the measure of self-objectification than non-dancers, $F(1, 68) = 9.49$, $p = .003$, and dancers' and non-dancers' scores did not significantly differ on body surveillance, $F(1, 71) = .71$, $p = .40$, or eating disordered behaviors, $F(1, 65) = .81$, $p = .37$. However, dancers were found to

have significantly higher levels of body shame compared to non-dancers, $F(1, 70) = 6.18$, $p = .02$.

Due to the surprising finding that dancers evidenced greater self-objectification than non-dancers, this scale was investigated in greater depth. As reviewed previously, scores on the Self-Objectification Questionnaire are calculated by summing scores on appearance and competence subscales, and then subtracting competence scores from appearance scores. Comparisons of mean scores on these two separate subscales revealed that while dancers valued competence attributes more highly than non-dancers, $F(1, 70) = 21.27$, $p < .001$, the two groups did not differ in valuations of appearance attributes, $F(1, 69) = .001$, $p = .97$.

Table 1. Means and Standard Deviations (In Parentheses) for Self-Objectification and Its Sequelae Among Dancers and Non-Dancers

	Dancers	Non-Dancers
Self-Objectification	-9.99 (1.34)**	-3.43 (1.43)
Appearance Subscale	28.14 (1.11)	28.08 (1.16)
Competence Subscale	38.11 (.94)***	31.83 (.97)
Body Surveillance	4.19 (.18)	3.97 (.17)
Body Shame	3.35 (.20)*	2.61 (.19)
Eating Disordered Behaviors	2.32 (.12)	2.16 (.12)

Note. Means and standard deviations presented are adjusted for the covariation of age and BMI. Difference of means significant at * $p < .05$, ** $p < .01$, *** $p < .001$.

Next, the proposed model of self-objectification and its sequelae was addressed. Correlations between the variables in the model are displayed in Table 2. Path analyses utilizing ordinary least squares multiple regression were conducted to test the complete proposed model for dancers and non-dancers separately. In path analysis, each variable is regressed on all other variables theorized to be causally prior (Pedhazur, 1997). Values for each path are reported as partial regression coefficients. Figure 1 is a presentation of the path analyses for both dancers and non-dancers, with only significant paths included in the models. Once again, age and BMI were controlled for in these analyses, but their influences are not displayed in Figure 1 (even when statistically significant) as they are considered as covariates throughout.

Table 2. Correlations Between Variables in the Overall Model of Self-Objectification for Dancers and Non-Dancers

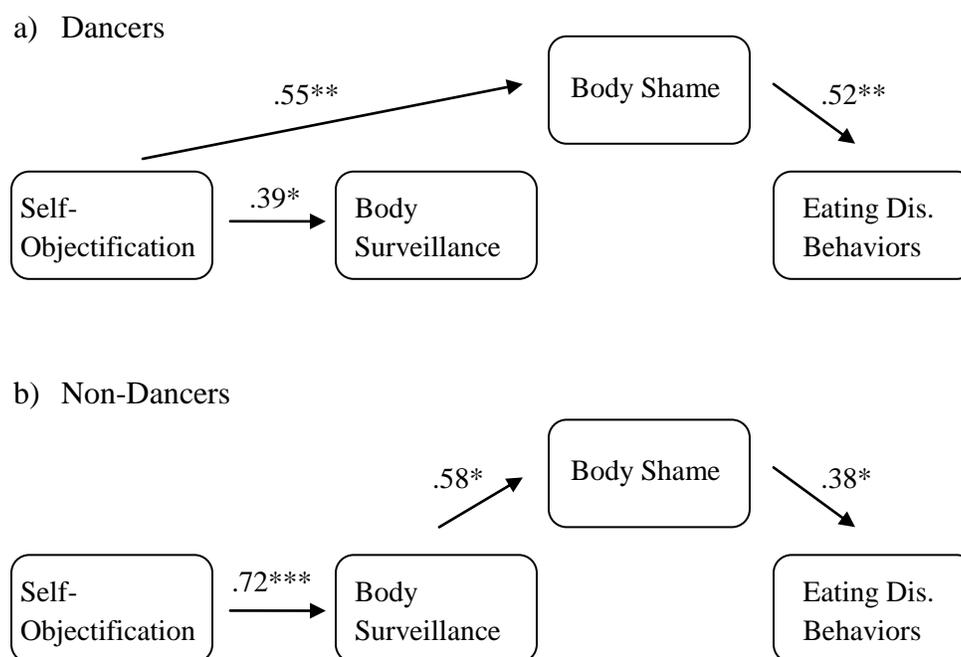
Measure	Self-Objectification	Body Surveillance	Body Shame	Eating Dis. Behaviors
Self-Objectification	--	.39*	.63***	.52**
Body Surveillance	.67**	--	.45**	.36*
Body Shame	.27	.48**	--	.64***
Eating Dis. Behaviors	.23	.24	.39*	--

Note. Correlations for dancers are presented above the diagonal and non-dancers below the diagonal. For dancers $n = 40$, for non-dancers $n = 39$. * $p < .05$, ** $p < .01$, *** $p < .001$.

As can be seen in Figure 1, among non-dancers the theorized model fit the data well, with self-objectification leading to body surveillance, which in turn predicted body

shame, which predicted eating disordered behaviors. None of the other paths were found to be significant for non-dancers in the current sample. Overall, the final multiple regression explained almost 40% of the variance in eating disordered behaviors among non-dancers, $F(5, 26) = 3.34, p = .02, R^2 = .39$. However, for dancers, some adjustments to the model were necessary. Specifically, rather than predicting body shame through body surveillance, self-objectification was found to be directly related to body shame among dancers when entered simultaneously with body surveillance. Body shame was then predictive of eating disordered behaviors as with non-dancers. For dancers in the current sample, the complete multiple regression accounted for more than half of the variance in eating disordered behaviors, $F(5, 26) = 6.23, p = .001, R^2 = .55$.

Figure 1. Path Analyses of Self-Objectification for a) Dancers and b) Non-Dancers



Note. Values displayed are standardized partial regression coefficients with BMI and age controlled for. * $p < .05$, ** $p < .01$, *** $p < .001$.

In order to test for the significance of the proposed mediation of the relationship between body surveillance and eating disordered behaviors by body shame for both groups, regression analyses with bias-corrected accelerated bootstrapping (1,000 replications) were utilized as recommended by Preacher and Hayes (2008). For non-dancers, body surveillance was found to be predictive of body shame, $b = .49$, $SE = .16$, $t(35) = 3.19$, $p = .003$, and body shame was found to be predictive of eating disordered behaviors, $b = .20$, $SE = .09$, $t(35) = 2.28$, $p = .03$. The total effect of body surveillance on eating disordered behaviors was revealed to be marginally significant, $b = .16$, $SE = .08$, $t(35) = 1.96$, $p = .06$, with a non-significant direct path, $b = .06$, $SE = .09$, $t(35) = .70$, $p = .49$, and a significant indirect path through the proposed mediator (body shame), $b = .10$, $SE = .05$, 95% confidence interval (CI) = .03 to .23. The significance of the indirect path indicates mediation for this group.

For dancers, body surveillance was found to be predictive of body shame, $b = .50$, $SE = .22$, $t(31) = 2.31$, $p = .03$, and body shame was found to be predictive of eating disordered behaviors, $b = .45$, $SE = .11$, $t(31) = 4.27$, $p < .001$. The total effect of body surveillance on eating disordered behaviors was revealed to be significant, $b = .34$, $SE = .15$, $t(31) = 2.22$, $p = .04$, with a non-significant direct path, $b = .12$, $SE = .13$, $t(31) = .87$, $p = .39$, and a significant indirect path through the proposed mediator (body shame), $b = .22$, $SE = .12$, 95% CI = .03 to .48. Once again, support was found for the proposed mediation among this group.

Finally, to address how styles of dance (i.e., classical vs. contemporary) might impact objectification, comparisons were first made on mean levels of each variable

between dancers in companies classified as primarily classical and those in companies classified as primarily modern (classifications of companies reported by dancers were made by the author). However, none of these comparisons were found to be significant and are therefore not reported. Furthermore, comparisons between those self-classified as primarily classical dancers or primarily contemporary dancers also revealed no significant differences on the variables of interest and are not reported here.

However, a final model was tested in which self-reported style of one's current company (scored from 1-*primarily contemporary* to 7-*primarily classical*) was used to predict the amount of objectifying cues in the environment (i.e., presence of mirrors, tight-fitting clothing, and corrections based upon how a movement looks rather than feels) and, in turn, levels of self-objectification and its sequelae. Correlations between self-reported company style and objectifying cues as well as self-objectification and its sequelae are presented in Table 3. A visual presentation of significant paths (with standardized partial regression coefficients) is shown in Figure 2.

Table 3. Correlations Between Variables in the Company Style Model for Dancers

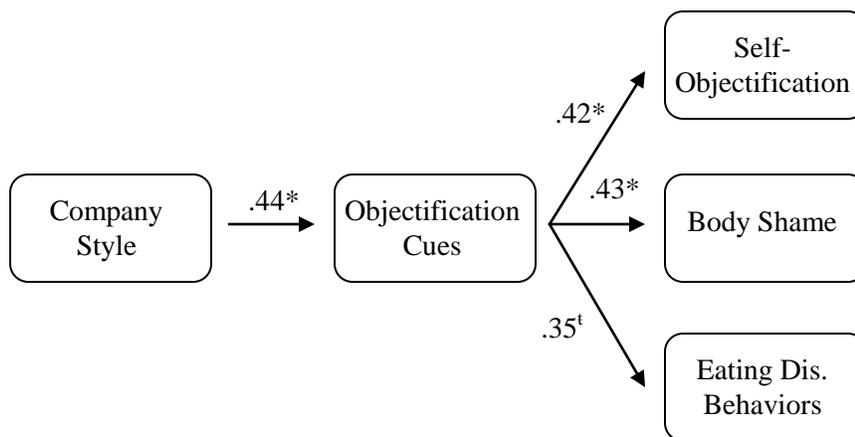
Measure	Company Style	Obj. Cues	Self-Obj.	Body Surveillance	Body Shame	Eating Dis. Behaviors
Company Style	--	.44**	.18	.16	-.02	-.22
Obj. Cues	.44**	--	.42*	.22	.36*	.22

Note. $n = 40$, * $p < .05$, ** $p < .01$.

As can be seen in Figure 2, the style of one's company is strongly related to the presence of objectifying cues in the environment (with those in more classical companies

reporting more cues of objectification), $t(34) = 2.47, p = .02$, which is related, in turn, to greater self-objectification, $t(33) = 2.30, p = .03$, greater body shame, $t(31) = 2.26, p = .03$, and marginally more eating disordered behaviors, $t(28) = 1.77, p = .09$.

Figure 2. Path Analyses of the Impact of Company Style on Main Study Variables



Note. Values displayed are standardized partial regression coefficients with BMI and age controlled for. ^t $p < .10$, * $p < .05$.

In order to test for the ability of objectification cues to mediate the relationships between company style and the two statistically significant outcomes (i.e., self-objectification and body shame), bootstrapping techniques were once again employed (Preacher & Hayes, 2008). First, mediation was tested with self-objectification as the outcome. Company style was found to be predictive of objectification cues, $b = .26, SE = .11, t(33) = 2.41, p = .02$, and objectification cues were found to be predictive of self-objectification, $b = 2.26, SE = .98, t(33) = 2.30, p = .03$. The total effect of company style on self-objectification was found to be non-significant, $b = .27, SE = .62, t(33) = .44, p = .66$, with a non-significant direct path, $b = -.32, SE = .64, t(33) = -.50, p = .62$,

but a significant indirect path through the proposed mediator (objectification cues), $b = .57$, $SE = .41$, 95% CI = .09 to 2.12.

Next, body shame was substituted as the criterion variable. Company style was again found to be predictive of objectification cues, $b = .26$, $SE = .12$, $t(31) = 2.16$, $p = .04$, and objectification cues were found to be predictive of body shame, $b = .38$, $SE = .17$, $t(31) = 2.26$, $p = .03$. The total effect of company style on body shame was also found to be non-significant, $b = -.06$, $SE = .11$, $t(31) = -.56$, $p = .58$, with a non-significant direct path, $b = -.16$, $SE = .12$, $t(31) = -1.41$, $p = .17$, but a significant indirect path through the proposed mediator (objectification cues), $b = .10$, $SE = .07$, 95% CI = .01 to .32.

CHAPTER FOUR

DISCUSSION

The current study provided mixed support for the hypotheses tested. To begin with, group differences in mean levels of self-objectification and its sequelae were not consistently found between dancers and non-dancers. Despite the theoretical reasons for expecting dancers to evidence greater levels of self-objectification compared to non-dancers (as well as past work showing such differences with former dancers; Tiggemann & Slater, 2001), when gauged through the SOQ, the opposite pattern of results was found. A key reason why dancers may have scored considerably lower than non-dancers on this measure of self-objectification was revealed in analyses of mean scores on the SOQ's two subscales. While dancers and non-dancers did not show evidence of differences in ratings of importance of physical appearance attributes (e.g., sex appeal, firm/sculpted muscles), dancers rated physical competence attributes (e.g., physical coordination, stamina) as much more important to their self-concepts than non-dancers. This difference in ratings, rather than reflecting genuine differences in self-objectification, may reflect the extreme importance of physical competence to professional dancers' careers and livelihoods.

Dancers, much like other physical performers and athletes, must value the competence of their bodies to a degree that normal individuals are not required to

endorse. An inherent part of the art form of dance is the ability to enact choreography, no matter how challenging or physically strenuous it may be. Therefore, the SOQ may not be the most accurate way to assess self-objectification when making comparisons between physical performers or athletes and control groups. While this measure may be useful in research with dancers focusing on *within-group* variations, studies focusing on *between-group* differences may benefit from exploring alternative ways of gauging self-objectification.

Providing support for the hypothesized elevation of body image concerns among professional dancers, mean differences in body shame were evident among the current sample, with dancers endorsing body shame items significantly more than non-dancers. This finding highlights the importance of tracing the etiology of these concerns among dancers. While this sample did not show significant differences in eating disordered behaviors between dancers and non-dancers, past work has established that dancers are, on average, more likely to suffer from eating disorder symptomatology compared to non-dancers (Hamilton et al., 1986; Ringham et al., 2006). Feeling shame about one's body can lead to maladaptive attempts to reshape one's appearance, such as through disordered eating (Noll & Fredrickson, 1998). The risk for dancers of significant health consequences is great, especially in light of the strenuous activities in which their bodies are engaged on a regular basis (Frusztajer et al., 1990). Dance can be enormously taxing on the body for individuals at the peak of health, so the strain is likely compounded by the occurrence of eating disorders.

Addressing the second hypothesis of the current study, support was found for the complete model of self-objectification leading to eating disordered behaviors among both dancers and non-dancers (including both female and male participants in both groups). To begin with, the relationship between body surveillance and eating disordered behaviors was found to be mediated by body shame for both groups. Although path analyses revealed that the extant model without adjustments nicely fit the non-dancer group, there was a small modification to the model for dancers: when predicting body shame with both body surveillance and self-objectification in the model, the path from self-objectification was found to be significant while the path from body surveillance was not. Again, there is evidence that self-objectification might function somewhat differently for dancers compared to non-dancers. It may be that among dancers, body shame is not a product of constant body monitoring and a perceived difference between one's current body and the media ideal (as it is posited to be for non-dancers), but a direct product of valuing physical appearance rather than physical competence in one's self-concept. Again, work specifically exploring the construct of self-objectification and its operation among dancers is called for and would help to clarify its contribution to body image disturbance within this population. However, overall, evidence suggests that many tenets of the overall model of self-objectification function identically for dancers and non-dancers.

Finally, the current study also tested the hypothesis that style of dance in which professional dancers participated would impact self-objectification. It was posited that classical dancers (more often trained and rehearsed in environments marked by cues of

objectification, such as full-length mirrors, tight apparel, and appearance-oriented corrections) would evidence greater levels of self-objectification than dancers participating in contemporary styles. While a dichotomous split of the dancer group based upon objective company classifications (conducted by the author) as well as self-reported personal styles revealed no significant differences in self-objectification, self-reported company style was found to be related to levels of self-objectification. Specifically, dancers who reported being employed at more classical (rather than contemporary) companies also reported a greater presence of objectifying cues in their work environments. The presence of these cues, in turn, was found to be associated with elevated levels of self-objectification as well as body shame and marginally higher levels of eating disordered behaviors.

This finding in particular supports the call for more research on how current dance education, training, and rehearsal might impact dancers' health through the mechanism of body image disturbance and the possible benefits of alternative forms of instruction (e.g., Green, 1999; Price & Pettijohn, 2006; Radell et al., 2002). For those who participate in dance training, from amateur dance classes to pre-professional and professional dance instruction, classical studio environments that feature constant exposure to full-length mirrors, mandatory form-fitting apparel, and instructors who focus on the appearance of dancers' movements can foster negative eating behaviors through self-objectification and its concomitant, body shame.

Limitations and Future Directions

A primary limitation of the current research is its cross-sectional nature. While posited paths were tested based upon previous research and theorizing, the direction of the effects obtained are left open to interpretation in the current work. Furthermore, the survey itself was composed of self-report measures, and these can lead to bias. For example, dancers with greater levels of self-objectification may be more aware of the presence of things like mirrors in their studios, and thus be more likely to report a greater presence of objectifying cues in the environment. Objective assessments of the presence of such cues among different companies, made by the research team, would help to alleviate this issue. However, of note, while company style was not directly related to self-objectification, it was predictive of objectifying cues in the environment. Across levels of self-objectification, those in more classical companies tended to report the presence of more objectifying cues compared to those in more contemporary companies, suggesting that the link between objectifying cues and self-objectification was not biased by self-reports.

Another important limitation of the current study was the relatively small sample size. While previous work with similar populations has utilized samples of similar size to the current study (Slater & Tiggemann, 2002; Tiggemann & Slater, 2001), this line of research would benefit from studies employing larger groups of dancers. While many statistically significant effects were found in the current study, null effects such as group differences in body surveillance and eating disordered behaviors may be due to small

sample sizes and relatively weak statistical power rather than the lack of actual group differences (indeed, means for both of these measures fell in the predicted direction).

Finally, there is also a limitation associated with the control sample utilized in the current study. While the dancers were older and could be described as established adults involved in professional careers, the control group was composed of younger individuals, most of whom were students at an exclusive private university. Self-objectification may have already been heightened among those in the control group due to age and environment (i.e., living on a college campus), making detection of differences even more difficult. However, it should be noted that the tenets of self-objectification theory have been tested extensively with college student participants, including using such participants as a comparison group for community samples of non-dancers (Tiggemann & Slater, 2001). Yet a more sensitive test of the prediction of heightened self-objectification among dancers would utilize a more theoretically comparable control group (without relying so heavily on college students).

Conclusion

Despite the limitations addressed above, the current study contributes to the growing literature on objectification theory as well as empirical scientific work exploring special issues of concern for the specific population of professional dancers. Because this group seems to be at risk for a number of eating and body related problems (e.g., Abraham, 1996a; Abraham, 1996b; Bettle, Bettle, Neumarker, & Neumarker, 2001; Brooks-Gunn, Burrow, & Warren, 1988; Pierce & Daleng, 1998; Raval di et al., 2003; Raval di et al., 2006; Ringham et al., 2006), studies such as the current one are vital to

improving conditions for professional dancers. While training in such a demanding and exacting physical art form will likely always have consequences for one's body, attempts to mitigate the negative impacts on body image for those pursuing professional careers in dance (or even those participating in training at any level) should be strongly pursued.

Lastly, the current study also contributes to an understanding of how self-objectification develops and occurs in real-world settings. Being surrounded on a regular basis by cues orienting one to view oneself as a detached body (e.g., mirrors, form-fitting apparel, and comments on appearance) exacerbates cultural pressures to take on an outsider's perspective of one's own body. Only through a full appreciation of the ways in which self-objectification operates in natural conditions present in individuals' everyday lives can researchers hope to mitigate its pernicious influences.

APPENDIX A
INFORMED CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH

Project Title: Bodies, Health, and Dance
Researcher: David Matthew Doyle, B.S.
Faculty Sponsor: Scott Tindale, Ph.D.

Introduction:

You are being asked to take part in a research study being conducted by David Matthew Doyle for a thesis under the supervision of Dr. Scott Tindale in the Department of Psychology at Loyola University of Chicago.

You are being asked to participate because you are either an elite professional dancer or have never before participated in formal dance studies. Please read this form carefully and ask any questions you may have before deciding whether to participate in the study.

Purpose:

The purpose of this study is to investigate how participation in dance is related to health and body image. Thus, elite professional dancers and non-dancers are being recruited to provide information about their health and their bodies.

Procedures:

If you agree to be in the study, you will be asked to complete a brief survey relating to your participation in dance and your feelings about your health and your body. The survey should take approximately 15-20 minutes to complete. If you are uncomfortable answering any questions or do not wish to provide any information, you are free to leave items blank and move on to the next question.

Risks/Benefits:

There are no foreseeable risks involved in participating in this research beyond those experienced in everyday life. This research will benefit those involved in the dance community as well as those with friends or relatives involved in dance. Also, those struggling with body image concerns will potentially benefit from the research currently being conducted.

Compensation:

After completing this study you will be entered into a drawing with the possibility of winning a \$100.00 Visa gift card. Once all data have been collected, a winner will be drawn at random and contacted via e-mail to receive their gift card. In order to receive this gift card you must provide your e-mail address, however it will not be stored with any of your responses.

Confidentiality:

All of the information that you provide in this survey will be kept completely confidential. You will not be asked to report your name or any other identifying

information, except your e-mail address, which will be used for the purpose of contacting the winner of the lottery. However, e-mail addresses will be stored separately from survey responses and thus will not be able to be associated at any point.

Voluntary Participation:

Participation in this study is voluntary. If you do not want to be in this study, you do not have to participate. Even if you decide to participate, you are free not to answer any question or to withdraw from participation at any time without penalty.

Contacts and Questions:

If you have questions about this research project or interview, feel free to contact David Doyle at ddoyle1@luc.edu or the faculty sponsor, Dr. Scott Tindale, at rtindal@luc.edu.

If you have questions about your rights as a research participant, you may contact the Loyola University Office of Research Services at (773) 508-2689.

Statement of Consent:

By clicking the link below, you indicate that you have read the information provided above and agree to participate in this research study. If you would like a copy of this form for your records, please print this page before clicking below.

APPENDIX B
SURVEY INSTRUMENT

Demographics and Background Information

First, we have a few brief demographic questions for you.

What is your age? _____

What is your gender? _____

What is your current height? _____ ft. _____ in.

What is your current weight? _____ lbs.

What is your race/ethnicity _____

What is your sexual orientation? _____

In what city, state, and country do you reside? _____, _____, _____

Dance Background

For the purposes of this survey, you will be asked to classify dance styles as either *classical* or *contemporary*.

Although there are many ways of defining these terms in the dance community, for this study, examples of *classical* dance include classical ballet (e.g., Petipa, Bournonville) and neoclassical ballet (e.g., Balanchine, MacMillan).

At the other end of the spectrum, *contemporary* dance includes early modern dance (e.g., Graham, Horton), more recent modern dance (e.g., Taylor, Ailey), as well as various styles from jazz to Latin dance.

Contemporary ballet (e.g., Forsythe, Kylian) falls somewhere in between these two anchors and should be considered as such.

Please use these guidelines along with your best judgment when answering the following questions.

For what company do you currently dance (if you currently dance for more than one company, please list the primary company with which you spend the greatest amount of time and refer to it in the following questions)? _____

For how many years have you danced with this company? _____

In your current company, are you more often free to wear "junk" clothing or required to wear form-fitting attire during class and rehearsal?

1	2	3	4	5	6	7
Free to Wear Junk						Required to Wear Form- Fitting

In your current company, how often do you train or rehearse in front of mirrors?

1	2	3	4	5	6	7
Never Train/Rehearse with Mirrors						Always Train/Rehearse with Mirrors

In your current company, how often are corrections oriented toward how a movement should feel versus how a movement should look?

1	2	3	4	5	6	7
More Often Feel						More Often Look

How would you classify your company's general style?

1	2	3	4	5	6	7
Primarily Contemporary						Primarily Classical

How much of your current company's repertory is classical?

1	2	3	4	5	6	7
None						All

How much of your current company's repertory is contemporary?

1	2	3	4	5	6	7
None						All

At what age did you begin to study dance? _____

For how many years have you studied dance (excluding any major breaks in training)?

How much of your dance training was in classical styles?

1	2	3	4	5	6	7
Not Much						A Lot

How much of your dance training was in contemporary styles?

1	2	3	4	5	6	7
Not Much						A Lot

Do you identify primarily as a classical or contemporary dancer? _____

Self-Objectification Questionnaire

We are interested in how people think about their bodies. The list on this page contains a variety of attributes that can be used to characterize the human body.

We would like you to review all 12 attributes and then take a minute to think about the impact each of these 12 attributes has on your physical self-concept, that is, *your evaluation of your own body*.

Important: Note that it does not matter *how* you describe yourself in terms of that attribute. For example, fitness level can have an impact on your physical self-concept regardless of whether you consider yourself to be physically fit, not physically fit, or any level in between.

Please use the following scale to rate the relative importance of each of these traits to you.

1	2	3	4	5	6	7	
						Very	
Unimportant						Important	

Physical coordination. _____

Strength. _____

Physical attractiveness. _____

Stamina. _____

Health. _____

Physical fitness level. _____

Firm/sculpted muscles. _____

Energy level (e.g., stamina). _____

Coloring. _____

Sex appeal. _____

Measurements (e.g., chest, waist, hips). _____

Weight. _____

OBCS – Body Surveillance

Please rate your level of agreement with each of these statements on the following scale.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

I rarely think about how I look. _____

I think it is more important that my clothes are comfortable than whether they look good on me. _____

I think more about how my body feels than how my body looks. _____

I rarely compare how I look with how other people look. _____

During the day I think about how I look many times. _____

I often worry about whether the clothes I am wearing make me look good. _____

I rarely worry about how I look to other people. _____

I am more concerned with what my body can do than how it looks. _____

OBCS – Body Shame

Please rate your level of agreement with each of these statements on the following scale.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

When I can't control my weight I feel like something must be wrong with me.

I feel ashamed of myself when I haven't made the effort to look my best. _____

I feel like I must be a bad person when I don't look as good as I could. _____

I would be ashamed for people to know what I really weigh. _____

I never worry that something is wrong with me when I am not exercising enough.

When I am not exercising enough I question whether or not I am a good enough person.

Even when I can't control my weight I think I am an okay person. _____

When I am not the size I think I should be I feel ashamed. _____

EAT-26 – Eating Disordered Behaviors

Please indicate how often the following statements apply to you using the following scale.

1	2	3	4	5	6
Never					Always

I am terrified about being overweight. _____

I avoid eating when I am hungry. _____

I find myself preoccupied with food. _____

I have gone on eating binges where I feel that I am unable to stop. _____

I cut my food into small pieces. _____

I am aware of the calorie content of the foods that I eat. _____

I particularly avoid foods with high carbohydrate content. _____

I feel that others would prefer if I ate more. _____

I vomit after I have eaten. _____

I feel extremely guilty after eating. _____

I am preoccupied with the desire to be thinner. _____

I think about burning up calories when I exercise. _____

Other people think I am too thin. _____

I am preoccupied with the thought of having fat on my body. _____

I take longer than others to eat my meals. _____

I avoid foods with sugar in them. _____

I eat diet foods. _____

I feel that food controls my life. _____

I display self-control around foods. _____

I feel that others pressure me to eat. _____

I give too much time and thought to food. _____

I feel uncomfortable after eating sweets. _____

I engage in dieting behavior. _____

I like my stomach to be empty. _____

I enjoy trying rich new foods. _____

I have the impulse to vomit after meals. _____

APPENDIX C
DEBRIEFING SHEET

Thank you for participating in this study. The purpose of the current research is to explore how dance training and employment in a professional dance company influence body image. Specifically, we have drawn upon objectification theory to explain possible differences in satisfaction with one's body. Objectification theory posits that individuals who are objectified by others over time come to internalize this "outsider's perspective" on their own bodies. This internalization is termed self-objectification, referring to constant surveillance and concern over how one's body appears to others. Previous studies have linked self-objectification to a host of negative outcomes, including increased eating disordered behaviors and shame over one's appearance.

Because of the ways in which dancers are trained, they are especially prone to view themselves through the lens of an outside observer. Thus, we speculate that dancers, especially those who are professionals, should evidence increased levels of self-objectification compared to non-dancers. However, different styles of dance emphasize different aspects of the body. For example, classical ballet is extremely focused on appearances, with mirrors and form-fitting clothing an all-but-inevitable feature of the training and rehearsal environment. Many styles of modern dance, on the other hand, emphasize the agency of the body and how movements "feel" to the dancers rather than how they should look to an audience. Of course, these lines are often blurred and dance styles can spill over into one another, but we hypothesize that dancers who are employed in more contemporary companies and those who have had more contemporary training should exhibit lower levels of self-objectification compared to their more classical counterparts.

In order to test these hypotheses, we are collecting information about the backgrounds of dancers and non-dancers, as well as how they view and feel about their bodies. After these data are collected we will compare the levels of self-objectification between groups: non-dancers, contemporary dancers, and classical dancers. We expect to see a linear increase in self-objectification among these groups in the order mentioned. Furthermore, we will explore whether years of participation in various forms of training are related to levels of self-objectification. Finally, as eating disordered behaviors are an important and potentially dangerous outcome of body image disturbance, we have also included questions assessing this type of behavior.

As mentioned earlier, this research has the potential to inform practices within the dance community, thus benefitting dancers' overall health and well-being. Findings from this study could provide a basis for increasing programs designed to teach young dancers about healthy eating and how to have good relationships with their own bodies. Furthermore, significant changes in how dancers are trained could come about based on this line of research. If you have any questions about the research study, please feel free to contact the primary investigator, David Doyle, ddoyle1@luc.edu, or the faculty sponsor, Dr. Scott Tindale, at rtindal@luc.edu. Thank you again for your participation in this study.

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VITA

David Matthew Doyle is a student in the doctoral program in applied social psychology at Loyola University Chicago. Mr. Doyle received his undergraduate degree in psychology from the University of Illinois at Urbana-Champaign in 2005. Subsequently, he worked as a research assistant in the Department of Psychology at Northwestern University, where he ran projects exploring body image disturbance and self-objectification among heterosexual and sexual minority men and women. Currently, Mr. Doyle also holds a graduate fellowship with the Center for the Human Rights of Children at Loyola. Mr. Doyle's commitment to human rights issues is demonstrated by his research on the mental and physical health of stigmatized individuals affected by prejudice and discrimination, especially those within the LGBT community. In 2008, Mr. Doyle was chosen as one of twenty-five graduate scholars to attend the International LGBT Psychology Summer Institute at the University of Michigan. In addition to his research career, Mr. Doyle has studied ballet and modern dance under a number of notable instructors at the University of Illinois, Loyola University Chicago, Lou Conte Dance Studio, Ruth Page Center for the Arts, and Studio Harmonique in Paris and has been accepted on scholarship to the Lar Lubovitch Dance Company Summer Intensive for 2010.

THESIS APPROVAL SHEET

The thesis submitted by David Matthew Doyle has been read and approved by the following committee:

R. Scott Tindale, Ph.D., Director
Professor of Psychology
Loyola University Chicago

Renee Engeln-Maddox, Ph.D.
Lecturer of Psychology
Northwestern University

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

Date

Director's Signature