

## THE EFFECT OF BALLET DANCE ATTIRE ON BODY AND SELF-PERCEPTIONS OF FEMALE DANCERS

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Body and self-perceptions of female ballet dancers ( $N = 38$ ) were assessed in a repeated measures design experiment investigating the effects of dance attire. Participants were randomly assigned to complete a ballet class dressed in a black leotard with pink tights or dressed in their choice of loose-fitting clothing referred to by dancers as "junk." The next day, participants completed a ballet class in the other clothing condition. After completing the ballet class each day, dancers completed surveys regarding self-perceived body image and performance level. Results revealed that participants reported significantly lower self- and body-perception ratings in the leotard with tights attire condition compared to the loose-fitting clothing condition. These results have implications for the effects of required dance attire on female dancer perceptions.

*Keywords:* body image, dance, self-objectification theory, eating disorders, dress

Just as musicians have their instruments, dancers have their bodies. Because of the constant focus on the body, body concerns are extremely common among ballet dancers (Tiggemann & Slater, 2001). For nondancers, body image problems may not be as severe because they are not required to wear skin-tight leotards and tights everyday and to stare at their bodies in the mirror for extended periods of time. Many companies or schools of dance require their students to participate in mandatory weigh-ins, although researchers find this practice creates problems that may contribute to eating disorders (i.e., Hamilton, 2002). Several studies delineate the differences in body image concerns comparing dancers to

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nondancers and draw attention to this important issue in relation to other mental health risks such as depression and eating disorders (Dotti et al., 2002). By understanding the causes of increased body image concern, researchers can help dancers reduce body image dissatisfaction and minimize health risks.

Bettle, Bettle, Neumärker, and Neumärker (2001) found that adolescent ballet dancers view themselves as less desirable, less attractive, less confident, less lovable, and more sensitive than age-matched nondancers. Tiggemann and Slater (2001) found that former ballet dancers reported higher self-surveillance and disordered eating than the same age group of nondancers. Pierce and Daleng (1998) discovered high levels of distorted body images among professional female dancers, using measures to compare current body image to ideal body image. These differences between dancers and nondancers are concerning, but how can these variations be explained?

Body image concerns in dancers may be partially explained by the presence and use of mirrors in the dance environment. Radell, Adame, and Cole (2002) assessed the effect of mirrors in dance instruction on body image of female beginning ballet dancers. Body-areas Satisfaction, Appearance Orientation, and Externality increased in the class taught without mirrors and Body-areas Satisfaction decreased in the class taught with mirrors. There was also a decline in physical weight for the mirror group dancers, which indicates a strong level of dissatisfaction with physical appearance. Radell, Adame, and Cole (2003) conducted another study to assess the performance of dancers who were taught with, and without, mirrors. Dancers were videotaped while performing the same adagio and grand allegro phase in the middle and at the end of the term and their performances were coded for skill. Dancers taught without mirrors showed a significant increase in adagio scores, but dancers taught with mirrors did not show significant increases in adagio and allegro scores. Besides negatively impacting body image, the presence of mirrors in a ballet classroom may also hinder dance skill acquisition.

Another possible influence on body and self-perceptions of dancers is their dance outfits. Wearing tight-fitting clothing that accentuates body features may be partially responsible for increased body concerns. Although we could not find any research that directly tests this idea in the field of dance, other research suggests that dress can certainly influence self-confidence, stress, competition, and self-definition (Schneider, 1974). Fredrickson, Roberts, Noll, Quinn, and Twenge (1998) had women try on a swimsuit or a sweater in front of a mirror and then complete various tests. Swimsuit-wearing women expressed more body shame and performed worse on a math test than did sweater-wearing women. As a follow-up, Fredrickson and Harrison (2005) explored the effects of self-objectification on athletic performance, and found that girls with higher objectification scores performed worse than did those with lower objectification

scores, independent of their actual athletic experience. Tight-fitting clothing may increase objectification and influence performance in dance.

Objectification theory (Fredrickson & Roberts, 1997) posits that being female in a culture that sexually objectifies the female body causes females to internalize societal assessments of their physical selves. Acceptance of these societal body attitudes can increase body monitoring, which can increase shame, guilt, and anxiety, which can subsequently lead to negative feelings about the body and yield poor motivation and performance. Objectification may be especially strong in the field of dance where females are constantly monitoring and critiquing their physical bodies and movements. Tiggemann and Slater (2001) tested former classic ballet dancers and nondancers on questionnaire measures of self-objectification. Former dancers scored higher on self-objectification, self-surveillance, and disordered eating. Slater and Tiggemann (2002) also used questionnaires to evaluate self-objectification in ballet dancers and nondancers, but did not find support for their predicted difference between these groups. Dancers did not report significantly greater self-objectification, anxiety over their appearance, or disordered eating compared to nondancers in this sample. Although these and many other studies (Fredrickson & Harrison, 2005; Harrison & Fredrickson, 2003) support objectification theory, the difference between dancers and nondancers is not as consistent.

This study was designed to examine the effect of attire on self-, body, and performance perceptions of female ballet dancers. Previous studies have not sufficiently addressed the effects of the dress variable. It was hypothesized that the dancer's body image, self-perception, and satisfaction with her dance performance would be more positive when she was allowed to wear loose-fitting clothing in ballet class as opposed to wearing the tight-fitting clothing that is often required for practices and performances.

## METHOD

### PARTICIPANTS

Thirty-eight female ballet dancers from the Mercyhurst College Dance Department participated in this study. These dancers ranged in ability level, body type, ethnicity, age, and personality. The average number of years dancing for the sample was 14.4 years (minimum = 6, maximum = 19) and 27.3% were freshmen, 27.3% were sophomores, 24.2% were juniors, and 21.2% were seniors. Participants were enrolled in two different sections of a ballet class, each taught by the same instructor.

## MATERIALS

Although there is a variety of previously validated body image measures, we chose to use a simplified 10-statement, Likert-style survey to measure changes in body image, performance satisfaction, and confidence level of the dancers in our sample. Participants rated themselves on each statement as to whether they *strongly agreed, agreed, strongly disagreed, disagreed, or felt neutral* in response to the item. Participants were also asked how many years they had been dancing and their academic year in school. The same survey was given to each dancer after she completed each of her respective ballet classes, wearing tight-fitting dance attire and wearing loose-fitting dance attire. Researchers did not provide the dance attire worn in this experiment. The pink tights and black leotards were standard attire required by the dance department. The “junk” dance attire was provided by each dancer herself, so she was able to wear whatever she desired from her own collection of clothing. Typically this includes skirts, legwarmers, sweat shirts, and sweat pants. None of the dancers chose to wear tight-fitting clothing when given the option to choose their dance attire, nor did they choose clothing that reveals a lot of skin (i.e., cropped t-shirts, shorts).

## PROCEDURE

The experimenter introduced the study abstractly as a survey of dancer opinions. Dancers were not told that the focus of the study was on self-perceptions and attire until after the second session was completed. The class instructor was female and she was blind to the hypotheses. The study took place on two different days and the dancers were split into two different groups. The first group wore leotards and tights on the first day while the second group wore their “junk” first. At the conclusion of the ballet class on the first day of the study, both groups completed the survey. The following day, the clothing roles were reversed with the first group wearing the “junk” and the second group wearing the leotards and tights. Following class, both groups completed the same survey that they had done on the previous day.

## RESULTS

The scores from all 10 statements were combined into a single measure of self- and body perception (Cronbach’s  $\alpha = .847$ ) and the mean difference scores between the two dance attire conditions were compared. When dancers wore “junk,” they reported significantly more positive body and self-perceptions compared to when they wore leotards and tights,  $t(37)=4.90$ ,  $p<.001$ ,  $M_s=3.15$  and  $3.72$ , respectively,  $d=1.22$ . Comparisons for each of the statements individually were also conducted. The differences between conditions were statistically significant for every statement except statement number 2 (“My body

is muscular”), which was approaching significance,  $p < .10$ . These outcomes are displayed in Table 1.

**TABLE 1**  
MEAN INDIVIDUAL STATEMENT RESPONSES BY DANCE ATTIRE CONDITION

Statement	“Junk” Condition	Leotard/Tights Condition	<i>t</i>	<i>p</i>	<i>d</i>
1. I like my body.	3.21 (.99)	2.61 (.97)	4.21	<.001	.966
2. My body is muscular.	3.79 (.86)	3.55 (.98)	1.78	.083	.423
3. Given the chance, there is nothing I would change about my body.	1.89 (.70)	1.61 (.59)	2.32	.026	.547
4. Compared to normal society (outside of the dance world), I fall on the thin side.	3.55 (.99)	3.18 (1.11)	3.37	.002	.825
5. In the dance world, I fall on the thin side.	2.34 (1.02)	2.11 (.98)	2.48	.018	.569
6. I am a good dancer.	3.74 (.55)	3.34 (.67)	3.58	.001	.830
7. My body is right for dancing.	2.89 (.98)	2.63 (1.02)	2.52	.016	.578
8. Compared to others in the class, I feel comfortable with my body.	3.34 (.71)	2.76 (.91)	3.38	.002	.784
9. Compared to others in the class, I feel comfortable with my dancing.	3.68 (.77)	3.24 (.94)	3.21	.003	.746
10. I enjoy looking at myself in the mirror during class.	3.05 (.96)	2.29 (.84)	3.80	.001	.873

*Note:* Repeated measures 2-tailed tests and effect size measures are presented along with means for each condition and standard deviations are presented in parentheses. Participants used the response scale 5=strongly agree, 4=agree, 3=neutral, 2=disagree, and 1=strongly disagree. Greater scores indicate a more positive body or self-perception.

To rule out the possibility that clothing condition order or the experience of the dancers may have influenced the change in body and self-perception scores, additional statistical tests were conducted. A 2 (clothing condition) x 2 (clothing condition order) mixed design ANOVA revealed that the order effect of clothing condition did not produce significant differences in self- and body perception,  $F(1, 36)=.795, p=.378$ . A 2 (clothing condition) x 4 (class rank) mixed design ANOVA showed that there were no differences in self- and body perception by class rank,  $F(3, 29)=1.43, p=.256$ . Reported years of dancing was negatively correlated to self- and body perception in each of the clothing conditions, although this relationship was not significant for the “junk” condition,  $r(31)=-.259, p=.145$ , nor the leotards and tights condition,  $r(31)=-.114, p=.528$ .

## DISCUSSION

Overall, results support the hypothesis that dancing in a tight-fitting outfit compared to a loose-fitting outfit causes female ballet dancers to feel more negative toward their bodies, selves, and performance. When dancers wore standard-issue tights and leotards, they reported less satisfaction with their body, self, and performance on all ten statements on the survey compared to when the dancers wore “junk.” The attire dancers wear during a single class can make a significant difference in self- and body perceptions.

In considering why clothing creates a more negative assessment of dancers’ bodies and performances, there are several explanations. Tight-fitting clothing may make dancers feel more physically uncomfortable and more restricted than looser-fitting clothing. Another consideration is how the leotards and tights look compared to the “junk.” Previous research on the presence or absence of mirrors in the dance environment (Radell, Adame, & Cole, 2002; Radell, Adame, & Cole, 2003) suggests that the focused attention of seeing your body in form-fitting outfits may negatively influence body image perceptions. In the present study, perceived performance suffered as a result of the dancers’ wearing tight clothing. Given the findings of Fredrickson and Harrison (2005) and objectification theory, it is possible that perceived performance suffered because dancers’ performances when wearing leotards and tights condition were worse than when they were wearing loose-fitting attire.

We recognize that choice may be an operating influence on the results. Simply giving dancers a choice of clothing to wear during practice, as opposed to requiring specific clothing, may explain the current results. However, dancers did choose to wear loose-fitting clothing and to cover their bodies more completely when given the choice. The measure of body image and self-perception chosen for the current study is also a recognized limitation. Although the current measure displays face validity and high internal consistency, it is not a well-validated and reliable measure of body image and self-perceptions. Additionally, although a repeated measure design allowed us to investigate changes in the same set of dancers, we did not include a true control group for comparison. Future studies should carefully control for these factors and explore the reasons why clothing makes such a difference in body and performance assessments. Qualitative research may also explain the feelings and thoughts of dancers in these conditions and may be a valuable tool for understanding these important perceptions.

Despite limitations, the findings of this study have important implications for dancers and their instructors. Recognizing that there is a strong relationship between negative body image, performance, and wearing tight-fitting clothing, instructors and dancers may consider changing their dress. Although not always

practical, greater choice in dance attire and removing requirements to wear form-fitting leotards and tights may be considered. We understand that loose dancewear is often prohibited because it does not allow an instructor to see a dancer's form, which could lead to incorrect alignment and increase the chances of injury. Being aware of this research on how detrimental tight-fitting dress can be to young dancers, dance teachers can be more understanding and supportive of their students, especially in regard to their bodies.

The results of this study may also help fitness instructors and individuals who exercise in general. Working out in tight clothes, especially at a public health club with its wall-to-wall mirrors, may hamper performance and threaten body image even among people who are not dancers. Loose-fitting clothing choices for work-out classes and individual exercise routines may improve body image perceptions and performance and lead to greater fitness success. Strelan, Mehaffey, and Tiggemann (2003) showed that objectification theory could be applied to understand the reasons why young women exercise. Self-objectification and reasons related to appearance were negatively related to body satisfaction, body esteem, and self-esteem. Shifting the focus away from the body while exercising by not wearing form-fitting outfits may increase positive body and self-perceptions and improve health outcomes.

The clothes people wear are more than just fashionable. This study demonstrates the importance of attire in determining body, self-, and performance assessments of female ballet dancers. These perceptions are extremely important because individuals with poor body image, self-assessment, and performance perceptions are at risk for depression, disordered eating, and other mental health disorders. By understanding how dress affects these perceptions, we can help reduce these negative health risks in dancers.

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