

ADOLESCENT BODY IMAGE:
EXAMINING THE RELATIONSHIP BETWEEN ADOLESCENT DANCERS
AND THEIR TEACHERS

BY
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Abstract

This study examined the relationship between the perceived verbal and nonverbal messages given by dance teachers and the body image of their adolescent dancers. Variables such as level of dance (i.e., competitive or purely recreational) and amount of time spent practicing dance were also examined. Seventy-eight female adolescents, who were enrolled in dance classes in studios in Western New York, participated in this study. This is a sample that is younger than has typically been studied. Results indicated that more negative messages perceived by the dancer from their teacher related to a more negative body image in the dancer. Additionally, a significant relationship with the dancers' body image was not demonstrated when considering competitive level and amount of time practicing dance. Thus, regardless of level of dance or amount of time spent practicing dance, a strong relationship existed between verbal and nonverbal messages perceived by the dancer from the teacher and a dancer's body image. Given the limited amount of current research that exists for this group of adolescent recreational dancers, the significant findings of the current study may begin to shape the future interactions between dance teachers and their students. Specifically, dance teachers should be aware of the connection between the messages they give and their dancer's body image. This awareness might prompt them to take more care with the messages they offer or even seek training in this area.

Chapter 1

Introduction

Adolescents spend most of their time in school, attending classes, meeting with friends, and learning new skills. But what happens when the last bell rings? Some students go home to start homework and studying, some go to *hang out*, others may be involved in after-school clubs and organizations, and still others are involved in a variety of in-school and out-of-school sports/physical activities. From the football and baseball fields to the pool and dance studio, today's adolescents are involved in a plethora of extracurricular activities. Participation in extracurricular activities has long been viewed as a protective factor for adolescents. Whether extracurricular activities are viewed as a way to improve students' self-esteem, keep them occupied during the afternoon hours, or provide them with positive adult support and modeling, they have been demonstrated to reduce drug/alcohol use (Field, Diego, & Sanders, 2001) and improve academic performance (Fredricks & Eccles, 2006).

One area that does not always seem protected by extracurricular activities is an adolescent's body image. While some research pegs participation in certain extracurricular activities (e.g., dance or wrestling), where weight may be viewed as a central focus, as having a negative impact on an adolescent's body image (Vicario & Chambliss, 2001), other research has found the positive peer interactions and adult attention in these activities as steps toward a positive body image (Nollen et al., 2006). Additionally, research done in the field of body image and eating disorders supports the idea that social (e.g., peer relationships) and psychological (e.g., self-esteem, self-concept) factors can work together to contribute to an adolescent's body image (Jones, 2004).

The concept of body image can, at times, appear elusive. With different terms like body image, body esteem, body ideal, ideal body size, and others appearing commonly in the literature, it is difficult to determine whether all of these are measuring the same construct or perhaps different elements of the same construct. While there are many domains in which research dealing with the body and an individual's body image have occurred, one of the primary areas has evaluated the perceptions and evaluations of one's own body appearance (Fisher, 1990).

Body Image of Dancers

The image of a dancer can evoke a number of mental pictures, from a traditional classically-trained ballerina, to a contemporary modern dancer, to even a street dancer. Comparative research done to examine the body image of dancers has looked at differences between types of dance genre, level of experience of the dancer, as well as the influence of mirrors in the studio or required apparel. For example, when looking across dance genres, Downey, Reel, SooHoo, and Zerbib (2010) reported that belly dance represents a counterpoint to more traditional forms of dance as it demonstrates a larger set of body image norms that are considered ideal, a lack of pressure for conformity in body image, and a high level of body satisfaction reported among its participants. Swami and Tovee (2009) examined issues of body image and body appreciation between a group of street dancers and an age-matched group of nondancers. Their research revealed no significant difference between the groups when their actual-ideal weight discrepancies were compared. They did find, however, that the group of street dancers maintained a higher level of body appreciation than the group of nondancers.

Other research in this area examined the level of experience of the dancers. Swami and

Harris (2012) looked at the associations between dance participation and body image across two different genres of dance, as well as the level of dancers' experience. Their research examined beginner and advanced ballet dancers as well as beginner and advanced contemporary dancers. When looking within dance genres, beginning ballet dancers demonstrated a significantly higher level of body appreciation than their more advanced counterparts. Contemporary dancers, however, demonstrated the opposite effect as the advanced contemporary dancers demonstrated a higher level of body appreciation than their beginner counterparts. When looking across levels of experience, the groups of advanced ballet and advanced contemporary dancers demonstrated a significantly higher discrepancy between their ideal body weight and actual body weight than the beginners in each genre.

The level of experience of the dancer was also examined in research conducted by Pollatou, Bakali, Theodorakis, and Goudas (2010), who examined female professional dance students in comparison to female amateur dance students between the ages of 15 and 30 years old. Their research revealed that the dancer's level of experience was significantly associated with two of the domains on the Multidimensional Body Self Relations Questionnaire (MBSRQ). The professional level dancers were revealed to demonstrate higher scores in the areas of fitness orientation and body area dissatisfaction.

Much research completed in the area of body image concerning dancers is completed with ballet dancers, often at a college, pre-professional, or elite/professional level. Research in this area has determined that for professional ballet dancers, the view they have of their bodies differs from that of the general population in western commercial societies. Specifically, the ballet dancers view their bodies as tools for which they make an investment that is expected to

assure them success in the future (Alexias & Dimitropoulou, 2011). Nascimento, Luna, and Fontenelle (2012) found that an elite group of Brazilian professional ballet dancers exhibited a higher lifetime prevalence of body dysmorphic disorder than the general population. Similarly, Pierce and Daleng (1998) asked a group of female professional ballet dancers to provide ratings of their current and ideal body shape. Their results showed that the dancers' rated their current body as significantly more negative than their ideal body image. It is noted that for all subjects, their current body composition, as determined by skinfold techniques, fell within the ideal range according to normative standards.

Additional research examining nonprofessional ballet dancers revealed similar findings. Ravaldi et al. (2003) found that a group of nonelite ballet dancers reported the highest levels of eating disorders (i.e., anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified) when compared to noncompetitive body builders, gym users, as well as male and female control groups. Ravaldi et al. (2006) found that the nonprofessional ballet dancers scored higher than control groups on most of the items that evaluated a negative body image as well as disordered eating behaviors. Additionally, Bettle, Bettle, Neumarker, and Neumarker (2001) questioned a group of adolescent ballet school students, as well as a group of age-matched controls, about their bodies and their personalities as they viewed them right now. The results revealed that female ballet dancers scored higher on measures of undesirability, sensitivity, and unattractiveness. The female ballet dancers also showed a distinct response profile which included a more negative body image and decreased self-esteem.

Francisco, Narciso, and Alarcao (2012) examined specific predictors of eating disorders among elite and nonelite ballet dancers and gymnasts. Their findings revealed that the degree of

pressure to be thin was more important than the competitive level when assessing disordered eating among these aesthetic athletes. Additionally, their study revealed that the specific act of practicing either gymnastics or ballet was the best predictor of disordered eating, suggesting that regardless of the competitive level of the participants the pressure to be thin inherent in these activities can lead to disordered eating.

Additional factors such as dance class attire and the use of mirrors within dance class have been studied. Price and Pettijohn (2006) randomly assigned ballet dancers to complete a ballet class in traditional attire (i.e., a black leotard with pink tights) or in loose fitting clothing of the dancers' choice, then complete a survey regarding their self-perceived body image and performance level. The results revealed lower self and body perceptions when dancers wore the traditional leotard and tights than the loose fitting clothes. Additional research by Radell, Adame, and Cole (2002) examined two beginning college ballet classes taught by the same instructor; one class was taught with the use of mirrors and the other without them. Body satisfaction was reported to be higher for participants in the nonmirror class than for the class taught using mirrors. This research suggests that even subtle factors may affect a dancer's body image.

Dancers have also been compared with other populations often considered at risk for eating disorders and body image issues, such as models as well as individuals diagnosed as having eating disorders. Zoletic and Durakovic-Belko (2009) found that ballerinas and models demonstrated significantly higher levels of body image distortions and symptoms of eating disorders than a control group of other young students. Urdapilleta, Cheneau, Masse, and Blanchet (2007) utilized a video distortion technique that made participants' bodies appear

larger. Participants were dancers, individuals diagnosed with anorexia, and other individuals used as a control. The participants were then instructed to adjust their images until the image reflected their estimated actual and desired body sizes. While all groups perceived themselves as heavier than they actually are, dancers demonstrated the most realistic perception of their body weight. The dancers, however, indicated that they would like to be thinner more often than the anorexic and control groups, who were satisfied with their body weight.

Overall, the above findings reveal body image issues among dancers; however, a large amount of research focuses specifically on ballet dancers. When other genres are considered, it is often at a preprofessional or professional level. For many children and adolescents, participation in dance class includes a variety of dance genres, such as ballet, jazz, tap, lyrical, musical theatre, hip hop, and modern/contemporary. What remains consistent across all dance levels and genres is the presence of a dance coach/instructor, yet little of the current research evaluates the impact these coaches may have.

Influence of Coaches

Coaches have been reported to have a lasting impact on the children they coach. While much of that information has been anecdotal, it has been demonstrated by Bailey (2006) that many of the positive outcomes for adolescents who participate in sports--improved social skills, appropriate social behaviors, increased self-esteem, and academic improvement--are mediated by the interactions between students and coaches. Reactions to specific coaching practices were examined in high school wrestlers (Turman, 2003). It was found that the athletes preferred when the coach created a positive and instructional climate from the start of the season. Styles of coaching and the environment they created was also studied by Francisco et al. (2012). They

questioned dance students from a professional dance school, as well as gymnasts from a gymnastics club, in order to investigate the qualities of those environments that are believed to make them high-risk environments for the development of eating disorders. Their findings revealed that it is the teachers and coaches who affect the environment and exert a strong influence on their students, more so than the students' parents, peers, and other environmental characteristics.

Whisenhunt, Williamson, Drab-Hudson, and Walden (2008) attempted to train cheerleading coaches to reduce the pressure for thinness and to identify the symptoms of eating disorders within their students. They were interested in determining whether this training could effect change for the athletes in this specific aesthetically-oriented sport. Cheerleading coaches, at both national and regional cheerleading conferences, participated in one of two workshops. The intervention workshop provided information about negative coaching behaviors, the symptoms of eating disorders, and ways to manage athletes with eating disorders. These coaches were encouraged to participate in follow-up strategies such as additional reading materials, videos, and parent handouts. The second workshop was used as a control. When examined eight months later, coaches who had attended the intervention workshop reported making changes in their coaching; however, changes in knowledge about eating disorders was not as evident. While this study followed the coaches and their self-report of coaching changes following the intervention workshop, the reaction of their students' to this change was not studied.

It may be important to consider the environment created among a group of athletes and their coaches. Krentz (2011) detailed that aesthetic sport athletes were noted to have a higher risk for developing an eating disorder and found that this risk was triggered by the social

pressure to maintain a lean appearance as established by the sport's environment. This was also demonstrated by the findings of de Bruin, Bakker, and Oudejans (2009), which described that among a group of female gymnasts and dancers, fewer instances of dieting and decreased perceptions of weight-related pressure from coaches and peers was reported when a climate of mastery rather than performance was the norm. While looking at other aesthetic sport athletes, Kerr, Berman, and de Souza (2006) surveyed current and retired gymnasts, their parents, coaches, and judges. They found that those gymnasts who experienced higher levels of disordered eating had received disparaging comments about their bodies and/or instructions to lose weight from their coaches.

While the direct practices of coaches can have an impact on athletes, the perceptions that the athletes hold of their coaches' beliefs can be just as important. In a study of 12- to 15-year-old competitive swimmers, Givvin (2001) explored the extent to which swimmers, along with their coaches and parents, were oriented toward the same goals. Her results indicated that adolescents' goal orientation matched their perceptions of the goal orientation of their parents and coaches. However, these reports were not congruent with the self-report of the parents and coaches. This suggests that the adolescent's perceptions of what their coaches and parents see as goals impact that they maintain as goals for themselves. In summary, the influence of coaches' words, actions, and subtle cues were demonstrated to have an effect on the body image, goal orientation, and level of disordered eating across a variety of sports; however, little research exists regarding the influence of dance instructors on their students in these same domains.

Current Study

The link between a negative body image and disordered eating has been documented

(APA, 2011). Additionally, participants in aesthetic sports such as dance and gymnastics have been found to be at a higher risk for developing a negative body image and actual eating disorders (Nascimento et al., 2012; Pollatou et al., 2010; Swami & Harris, 2012). The existing research examining dancers' increased risk for a negative body image and eating disorders has a strong focus on elite level ballet dancers. Whereas previous research has examined external factors such as the use of mirrors in the dance classroom or the attire of the dancer, it is usually the dance coach who has the final say about those factors. Also, it is the dance coach who is the leader for creating the environment in the dance classroom. Still, existing research fails to address the relationship between the dance instructor and their students which would lead to such an environment that would promote a negative body image.

The current study examined the perceptions of adolescents who participate in a variety of types of dance classes at a recreational level (both competitively and noncompetitively) about the body image pressures from dance instructors. Given the amount of time and the often close relationships between dancers and their dance instructors, it was hypothesized that:

1. The verbal and nonverbal messages perceived by the dancer from the teachers will relate to the dancer's body image. Specifically, perceived negative messages will relate to a more negative body image.
2. Students who are involved in dance at the competitive level will demonstrate a stronger relationship between perceived messages and body image than their purely recreational counterparts.
3. Students who spend more time practicing dance will demonstrate a stronger relationship between perceived messages and body image.

Chapter 2

Review of the Literature

This review of current literature defines body image, its links to disordered eating, the specific relationships between athletes and body image disorders, and the relationship between adults and adolescents that can promote or degrade the adolescent's body image. The review also examines the effects that participation in sports can have for adolescents in other areas such as improving academics, decreasing risky sexual behavior, and decreased cigarette and marijuana use.

Body Image

The construct of body image is more closely examined in this section. Specifically, what leads to one's own perception of one's body and what factors lead to biases regarding that image? Fischer (1990, p. 17) indicated nine topical areas that define one's body image:

1. Perception and evaluation of one's body appearance.
2. Accuracy of perception of one's body size.
3. Accuracy of perception of one's body sensations.
4. Ability to judge the spatial position of one's body.
5. Feelings about the definiteness and protective value of the body boundaries.
6. Distortions in body sensations and experiences associated with psychopathology and brain damage.
7. Responses to body damage, loss of parts, and surgery.
8. Responses to various procedures designed to camouflage the body cosmetically or somehow 'improve' it.

9. Attitudes and feelings pertinent to the sexual identity of one's body.

Researchers have developed models to explain how one's body image is constructed. Cash (2002) provided a cognitive-behavioral model of body-image development. He noted that complex systems of historical and developmental influences, as well as a series of proximal events, interact to comprise a person's body image. Cash described the systems of historical and developmental influences as including cultural socialization, interpersonal experiences, physical characteristics, and personality attributes. Cultural socialization is described as the standards and/or expectations of physical appearance and the social value placed on the possession or lack of these physical characteristics. Interpersonal experiences are described as the expectations, opinions, verbal, and nonverbal communications that are conveyed through interactions with peers, family, friends, and even strangers. Physical characteristics are described as the degree with which one's appearance matches social standards of physical attractiveness. Personality attributes include one's self-esteem and self-concept, in that a positive self-concept may help to buffer against events that threaten one's body image.

Additionally, Cash (2002) described the series of proximal events (i.e., the internal thoughts, feelings, and self-talk) which act to have an effect on one's body image. First, internal dialogues are described as emotion-laden automatic thoughts, inferences, interpretations, and conclusions about one's looks. Second, adjustive self-regulatory strategies and behaviors are well-learned cognitive strategies or behaviors that individuals engage in to adjust to environmental needs. Specifically, Cash described three reoccurring coping mechanisms:

1. Avoidance - attempts to avoid the threat to one's thoughts and feelings about body image.

2. Appearance Fixing - attempts to change one's appearance by concealing, camouflaging, or *fixing* a physical characteristic perceived as disturbing.
3. Positive Rational Acceptance - actions or strategies that focus on positive self-care or rational self-talk and acceptance.

Research using Cash's 39-item self-report measure, the Body Image Coping Strategies Inventory, revealed that the first two of the coping mechanisms are significantly associated with dysfunctional body-image schemas.

Similarly, an information-processing perspective on body image describes one's body image as being perpetuated by a feedback loop. This feedback loop begins where one's self-schema related to body shape/size or eating is activated by individual thoughts. For individuals who develop a more negative body image, these thoughts may include a fear of fatness, over-concern with body shape/size, internalization of an ideal body shape, and perfectionism/obsessionality, or another stimulus which increases the probability of cognitive bias about one's body image. An increased cognitive bias then produces an increased negative emotion that relates back to the individual's self-schema (Williamson, Stewart, White, & York-Crowe, 2002). Both models indicate the importance of personal characteristics while noting the influence of environmental factors. The increased ability for meta-cognition and concern over social/environmental acceptance and *fitting in* makes adolescence a likely time for body image concerns to develop (Cash, 2002).

Measuring Body Image

As researchers have tried to measure body image, it appears that there are two factors that comprise one's body image. The first factor is a perceptual one, relating to the accuracy with

which an individual perceives his or her actual body size. The second factor is a subjective one, as it involves what attitudes individuals hold toward their body size, appearance of specific body parts, or overall appearance. Measuring the perceptual component of body image emerged as a prominent means of assessing body image in the 1980s. These measures sought to separate the sensory and nonsensory components of body image. Sensory components were seen as processes involving the visual system, whereas nonsensory components were considered the brain's interpretation of the visual input (Thompson & Gardner, 2002).

The method of constant stimuli, as utilized by Gardner, Morrell, Watson, and Sandoval (1989), showed participants a static video image of themselves that may or may not be distorted in size. Participants were then asked to judge whether or not distortion was present. By looking at a number of small distortion levels, the percent of body size distortion exhibited by the subject can be determined. Similarly, the signal detection theory, as utilized by Gardner and Moncrieff (1988), showed participants a static video of themselves distorted to be too wide or too thin. The participants' sensory sensitivity was determined by their ability to correctly identify the images as being too wide or too thin and their response bias is noted by their tendency to report the images as too wide or too thin. Specifically, it was found that participants with anorexia were able to correctly identify distorted images of themselves with the same accuracy as participants without anorexia; however, the participants with anorexia more commonly identified that their image was distorted in size whether or not their image was truly distorted. This demonstrated the nonsensory factors that influence body image.

Sociocultural Factors

Aside from specific peer and parental perceptions, sociocultural influences have also

been tagged as contributing to body image. Sociocultural factors, such as accepting standard media images of beauty, have been associated lowered body satisfaction. That is, as female adolescents age and internalize more sociocultural attitudes toward appearance, their level of body satisfaction decreases (Clay, Vignoles, & Dittmar, 2005). Clark and Tiggemann (2007) also found that for young girls, greater media exposure was associated with a more negative body image. It is through the internalization of socio-cultural influences that adolescents develop part of their body image. Specifically for boys, body dissatisfaction was revealed as an internalized commitment to masculine ideals such as well-developed muscularity (Jones, 2004). However, Jones, Vigfusdottir, and Lee (2004) found that the internalization of socially accepted appearance ideals related to body dissatisfaction for both boys and girls.

The range of consequences for an adolescent with a negative body image is demonstrated as being harmful. Newman, Sontag, and Salvato (2006) found that body dissatisfaction is associated with anxiety, depression, and increased somatization in adolescents. In contrast, they found that, over time, psychological health and peer competence in developing a positive social network were linked with positive body image. To further demonstrate the harmful consequences that could result from having a negative body image, Skemp-Arlt (2006) found that body dissatisfaction was associated with unhealthy eating patterns, extreme dieting behaviors, as well as the development of eating disorders.

Body Image and Eating Disorders

The American Psychological Association (APA, 2011) described that many people in the United States worry about their weight occasionally; however, people with eating disorders take these concerns to the extreme. Three major types of eating disorders are described--anorexia

nervosa, bulimia nervosa, and binge eating disorder. Anorexia nervosa involves having a distorted body image that causes people to see themselves as overweight even when they are very thin. Individuals diagnosed with anorexia nervosa often exhibit low body weight, refusal to eat, a compulsive exercise routine, and/or a number of unusual eating habits such as refusing to eat in front of others. Bulimia nervosa involves eating excessive quantities of food, then purging oneself of that food, often through the use of laxatives, enemas, vomiting and/or exercising. These behaviors often occur in private with a high level of secrecy as the person may feel ashamed at the binge eating behavior, yet relieved once they have purged themselves of the food. A binge eating disorder includes frequent episodes of excessive and out-of-control eating; however, no purging behavior is expressed. The APA continues to note that a person's eating behaviors, whether extremely restrictive or excessive, are ultimately associated with having a negative impact on that person's functioning and/or self-image.

The National Institute of Mental Health (NIMH, 2010) has compiled information from the National Comorbidity Survey – Adolescent Supplement (NCS-A), which reports that approximately 2.7% of adolescents aged 13 to 17 are suffering from an eating disorder. Specifically, they noted that girls are two and a half times more likely than boys to have an eating disorder. The NIMH also reported on the Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES) which is a "program of studies designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in that it combines interviews and physical examinations" (CDC, 2010). In this reporting, the NIMH notes that the prevalence of eating disorders among children aged 8 to 15 is only one tenth of one percent.

Adolescents and Body Image

As adolescents look for peer acceptance, the increase in social comparisons through discussions of body and appearance issues have revealed themselves to be negatively related to the adolescent's body image (Clark & Tiggemann, 2007; Jones, 2004; Jones, Vigfusdottir, & Lee, 2004; Nollen et al., 2006). Additionally, Jones and Crawford (2005) found that both boys and girls in grades 8 to 11 with lower levels of body satisfaction tended to have more peer conversations relating to appearance issues. For boys, these conversations frequently revolved around muscle-building, while the girls' conversations were of a more general appearance nature. The importance of the peer group for adolescents is widely accepted. As such, it is understandable that an adolescents' desire to fit in with regard to their appearance can have an effect on their body image.

Levine and Smolak (2004) discussed the trends in adolescent body image. They define the ideal of feminine beauty as, "white, young, tall, firm but not too muscular, and somehow slender but full-breasted." They found that as girls age from 12 to 15, satisfaction with their overall appearance declined, and that approximately 40 to 70% of adolescent girls were dissatisfied with two or more parts of their bodies.

In addition to peer perceptions of appearance, parental perceptions have also been demonstrated to play a role in adolescents' perceptions of their body and what they view as an ideal body size. For example, Nollen et al. (2006) found that for white adolescents, ideal body size was directly related with their perceptions of how their parents wanted them to look. Also, for black adolescent males, how their parents thought they looked was related to their son's ideal body size.

Corson and Andersen (2004) looked more specifically at body image issues among boys and men. It has been described that defining the ideal male beauty is more difficult, as looks are less significant in self-definition for males than they are for females. It was found that being short and/or overweight were less acceptable male characteristics. Corson and Andersen found that males demonstrated a greater variety of body concerns than their female counterparts, as the ideal male body is more complex than the thin ideal to which women aspire. Specifically, they describe the image of a *supermale* as being thin, muscular, and handsome. Olivardia (2004) related that many males suffer from an *Adonis complex*, the quest for an ideal male body in which men seek to lose body fat while maintaining muscularity.

Adult Influences on Body Image

Whether looking at the domains of involvement in sports or body image, parental and additional adult influences have revealed themselves as important factors. When looking at different influences on body image for pre-adolescent girls, Stinton and Birch (2006) measured adolescent perceptions of parental weight concerns. They asked adolescent girls if their parents ever tried to lose weight, if their parents placed importance on their daughter being thin, if their parents encouraged weight loss, and if their parents teased or criticized them about their weight. It was revealed that parental weight concerns were positively associated with increased levels of body dissatisfaction in their daughters. On the other hand, it was found that adolescents who perceived their parents to be more supportive tended to have higher body satisfaction.

Related, McCabe and Ricciardelli (2001) reported that adolescents are attuned to the messages presented to them by their parents. Specifically, it was noted that mothers, more than fathers, encouraged adolescents to adopt strategies that would help them to make their bodies

look more like the societal ideal. Previous research by Ricciardelli, McCabe, and Banfield (2000) demonstrated that regardless of parent gender, parents have a strong influence on their adolescent's body image. Specific family interactions that were found to promote disordered eating included a critical family environment, coercive parent control, and regular conversations about weight-related issues.

Kearney-Cooke (2004) related that it is not just words spoken by parents that can have an impact on their child's body image. Rather, she found that the combination of spoken words, nonverbal communications, as well as physical touching that occurs between a parent and child had an impact on a child's body image. Specifically she detailed that, "Children internalize the way they are touched, talked about, and accepted or rejected by family members throughout their developing years" (p. 102).

Levinson, Powell, and Steelman (1986) provided further evidence for the role that parents play in the development of their child's body image. In this study, physicians, a large cross-section of adolescents (approximately 6500), and the parents of those adolescents were asked to evaluate the adolescents' weight as being overweight, about the right weight, or underweight. Their findings revealed that, in general, the adolescents were more likely to denigrate their weight, girls were more likely to express being overweight than boys, and that the strongest predictor of an adolescent's perception of their weight was their parents' assessment. The predictive relationship between the parent and child were stronger than that of a physician or demographic characteristics.

Athleticism and Body Image

For athletes at an elite or professional level, the relationship between body size or shape

and successful performance can be closely tied. This is witnessed in professional sports where a large muscle mass can gain advantage over an opponent or a lean stature aids in agility. In some high-level competitive arenas, however, judging can be more subjective, such as the case with gymnastics, dance, and figure skating. Davis (2004) noted the advantages offered to women with a slender body shape in these more subjective athletic arenas. As such, extreme weight loss is even encouraged to attain these slender body ideals for elite athletes. Davis also reported, “as many as 15% to 20% of high level competitive female athletes regularly engage in clinically significant weight loss methods such as severe food restriction, self-induced vomiting, and laxative use in order to conform to the body shape standards of their sport” (p. 220). Davis (2004) continued to note that the high level of encouragement for these behaviors may be due to the nature of an elite athlete to continually strive for success even in spite of obstacles such as illness, injury, or pain.

At a non-elite level, Levine and Smolak (2004) found that participation in sports improved self-esteem and that, when looking at adolescent girls, there was no difference in body satisfaction or disordered eating between athletes and non-athletes. The spectrum from elite and professional athletes to non-athletes is vast and includes a group of people for whom physical activity is on a more recreational level. Davis (2004) addressed a common belief that those who engage in exercise are likely to have a more positive view of their body. She found that for females ages 16 to 21, it is the inverse that is actually true; there is a negative association between the level of physical activity and body satisfaction in young women of those ages. It was only for men and older women in which the relationship between the level of physical activity and body satisfaction was a positive one.

Hubbard, Gray, and Parker (1998) examined women's motivation for exercise, considering food related and non-food related motivators. For women who described their motivation for exercising as wanting to work off the food they had just eaten, scores on the Eating Disorder Inventory were nearly double that of women who did not carry the same motivation for exercise.

Otis, Drinkwater, Johnson, Loucks, and Wilmore (1997) described a syndrome which occurs in physically active females. Their position statement for the American College of Sports Medicine stated that components of disordered eating, amenorrhea, and osteoporosis combine to create the syndrome entitled the female athlete triad. Otis et al. (1997) noted that the greatest risk for this syndrome exists for females who participated in sports where a low body weight was emphasized. Hoch et al. (2011) evaluated a group of professional female ballet dancers to assess the prevalence of the three components of the female athlete triad. In their study, 32% of participants had elevated scores on a measure of disordered eating, 36% reported current dysfunction of their menstrual cycle, and 23% demonstrated low bone mineral density. In all, 37% of the participants demonstrated three of the four components of the female athlete triad.

High school students have also been studied to evaluate the degree to which they demonstrates elements of the female athlete triad. Hoch et al. (2009) studied a group of high school varsity athletes and determined that 78% of these participants demonstrated at least one component of the triad with only one participant demonstrating all three elements. Specifically, low energy availability was reported in 36% of the athletes, menstrual dysfunction was reported by 54% of the athletes, and 16% of the athletes demonstrated a low bone mass density. Similarly, Nichols, Rauh, Lawson, Ji, and Barkai (2006) studied a group of female high school

athletes. They reported that 5.9% of the participants met the criteria for two components of the triad and 1.2% met the criteria for all three components. Specifically, 18.2% demonstrated disordered eating, 23.5% demonstrated menstrual dysfunction, and 21.8% had low bone mass density. Regardless of the level of sport participation, elite/professional to high school recreational, some females of all ages demonstrate components of the female athlete triad; however, these studies looking at the adolescent athletes fail to differentiate between athletic versus aesthetic sports.

Sports as Protective Factors

Are sports and other related physically demanding extracurricular activities just a way to occupy the day-time hours of adolescents or do they provide some other benefits to the participants? Studies have been conducted to explore the protective factors that sports and related activities may have for the adolescents involved in them in terms of various areas of adolescent life such as academics, physical, and psychological domains. With regard to academics, research findings indicate that students who participate in sports recognize increased academic benefits and higher grades (Eccles & Barber, 1999; Field et al., 2001; Fredricks & Eccles, 2006). Other areas in which research has demonstrated participation in sports as a protective factor is in the arena of teen pregnancy (Dodge & Jaccard, 2002) and risky sexual behaviors for adolescent girls (Lehman & Koerner, 2004; Savage & Holcomb, 1999).

A large domain in which sports has been viewed as a protective factor is in the area of drug and alcohol use (Field et al., 2001). Dawkins, Williams, and Guilbault (2006) utilized data from the National Educational Longitudinal Survey (NELS), which asked a national sample of adolescents about their participation in sports as well as their cigarette and marijuana use. Their

study revealed that participation in school-based sports was associated with lowered levels of marijuana and cigarette use among students. The benefits of sports as a protective factor against drug use was also supported by the findings of the Social Development Commission in Milwaukee, Wisconsin (1992), which interviewed adolescents and young adults in regard to their involvement in a variety of activities (including sports), as well as their use of alcohol and drugs. Their results revealed that participants who were involved in organized sports were less likely to be engaged in alcohol or drug use. Rhea and Lantz (2004) lend confirmation to these findings and found greater participation in deviant behaviors, such as drinking and driving, problems at school, and trouble with the police, for adolescent male non-athletes than their athletic peers.

Another domain in which participation in sports has been found to be a protective factor is in psychological well-being. Studies looking at levels of depression revealed that athletes demonstrated lower levels of depression than non-athletes (Boone & Leadbeater, 2006; Field et al., 2001). Fauth, Roth, and Brooks-Gunn (2007) found lower levels of both depressive and anxious symptoms for young adolescent athletes than non-athletes. When looking at the relationship between participation in sports and depressed mood in high school students, Gore, Farrell, and Gordon (2001) found that a significant negative association existed between involvement in team sports and depressed mood for females. These findings were supported by Fredricks and Eccles (2006), whose study of 11th graders found that increased positive psychological and behavioral outcomes were demonstrated by those students who participated in extracurricular activities.

Differences Among Types of Sports

Even though in general, participation in sports has been linked with a number of positive

factors, some questions still remain as to why this is the case. Research that looked more closely at this issue has pointed to the type of sport or activity in which an adolescent participates as a possible factor. Participation in different types of extracurricular activities by Michigan adolescents were studied by Eccles and Barber (1999). They found that prosocial activities, such as volunteering, were related to positive educational trajectories and lowered evidence of risky behaviors, while students who were involved in team sports demonstrated a positive educational trajectory only.

Looking more specifically at type of sport, research conducted by Ford (2007) found that as athletes moved to college, there was a demonstrated discrepancy in substance use across different types of sports. Specifically, male hockey and female soccer players were most likely to report substance use while basketball and track/field athletes were the least likely to report substance use. Other research revealed that those athletes who participated in track or tennis were less likely to participate in risky behaviors than those in other team sports (Schneider & Greenberg, 1992).

Little comparative research has been completed about the prevalence of body image issues across sporting activities. However, one study conducted by McKay-Parks and Read (1997) indicated that in comparison to cross-country runners, football players report a more positive body-image. In addition, research by Vicario, Henninger, and Chambliss (2001) looked specifically at body image issues in a group of dancers. Eighty-five percent of the dancers reported that being involved in dance did not make them dislike their bodies. Sports such as gymnastics, dance, and figure skating have been labeled by some researchers as aesthetic, lean, appearance-oriented, or judged sports in that the aesthetic or outward appearance of the athlete is

considered as a qualification of their performance (Sundgot-Borgen, 1994). Further, Krentz (2011) reported that athletes from aesthetic sports appeared to have a higher risk for an eating disorders if they perceived there to be a possibility to enhance their performance through weight-regulation.

Conclusions

As previously mentioned, adolescence is a prime time for concerns about one's body image as adolescents look for peer acceptance and increase social comparisons (Clark & Tiggemann, 2007; Jones, 2004; Jones, Vigfusdottir, & Lee, 2004; Nollen et al., 2006). Additionally, research points to the impact that adults' verbal and nonverbal messages have on adolescents' body image (Kearney-Cooke, 2004; McCabe & Ricciardelli, 2001; Ricciardelli et al., 2000; Stinton & Birch, 2006). When looking at the impact that participation in sports can have on adolescents' body image, the Minnesota University Center for Research on Girls and Women in Sport (1997) found that involvement in sports for girls is linked with improved feelings about body image, self-esteem, and self-confidence. This was supported by Jaffee and Mahle-Lutter (1995) whose national survey of 152 adolescent girls found that those who demonstrated lower levels of participation in sports reported a more negative body image. Richman and Shaffer (2000) added additional strength to these findings in their reporting that for adolescent girls, participation in sports is positively correlated with body image. On the other hand, it has been noted by the Minnesota University Center for Research on Girls and Women (1997) that excessive exercise and certain forms of athletic participation can increase the likelihood for eating disorders. The complex relationship between athletic participation and body image is supported by much research (e.g., Davis, 2004; Otis et al., 1997).

More specifically, participation in different genres of dance has noted varying impacts on participants' body image (Downey et al., 2010; Swami & Tovee, 2009). This has also been found regarding the level of participation and experience of the dancer (Nascimento et al., 2012, Pollatou et al., 2010, Swami & Harris, 2012). With the conflicting research surrounding extracurricular activities, specifically participation in dance, and their effects on adolescents' body image, it is fitting to take a closer look at the interaction between these variables. As there currently stand little research examining the relationship between dance coaches and their dancer's body image, the present study sought to examine this relationship. Specifically, the present study examined the relationship between the perceived negative verbal and nonverbal messages dancers receive from their dance coaches, the level of competitiveness in which the dancer participates, and the amount of time the dancer spends in dance class as they correlated with the adolescents' body image.

Chapter 3

Method

The current research utilized a sequential regression analysis to examine the relationship between the perceived verbal and nonverbal messages given by dance teachers and their adolescent dancers' body image. Variables such as level of dance (i.e., competitive or purely recreational) and amount of time spent practicing dance were also examined for possible interaction effects.

Participants

A total of 78 participants completed a questionnaire packet. All participants were between 13 and 18 years of age ($M = 14.71$, $SD = 1.52$). All participants identified as female. In terms of race/ethnicity, 92.3% identified as White, 0% as Black or African American, 2.6% as Asian or Native Hawaiian/Pacific Islander, 1.3% as Hispanic or Latino, 1.3% as Multiracial, and 2.6% as Other. Participants were identified as being enrolled as a student at one of the participating Western New York dance studios. The hours of dance class in which they were enrolled each week was reported ($M = 8.93$, $SD = 6.11$, $min = .5$, $max = 36$). Forty-seven participants reported as being a member of their studio's competitive team and 31 participants reported as dancing recreationally. While individual participants were not asked what type of dance classes they participated, typically students involved in dance programs might take classes in tap, jazz, ballet, acrobatics, or hip hop. For all participants, a Body Mass Index was calculated ($M = 21.00$, $SD = 3.27$, $min = 14.6$, $max = 32.3$), based upon self reports of weight and height. The socioeconomic status (SES) of individual participants was not assessed; however, it can be generally reported that the majority of participants would fall within a middle to high SES.

Measures

Demographic Information

A number of demographic questions (see Appendix A) were asked to obtain general information on each participant. Questions gathered information such as age, birthdate, gender, race, height, weight, number of hours of dance instruction per week, and level of dance (i.e., competitive or recreational).

Multidimensional Body-Self Relations Questionnaire Appearance Scales (MBSRQ-AS; Cash, Winstead, & Janda, 1986)

The Multidimensional Body-Self Relations Questionnaire Appearance Scales (MBSRQ-AS) is a self-report measure used in the assessment of body image. The MBSRQ-AS consists of five subscales--Appearance Evaluation, Appearance Orientation, Body Areas Satisfaction, Overweight Preoccupation, and Self-Classified Weight. For the current study, participants completed the MBSRQ-Appearance Evaluation and the Body Areas Satisfaction subscales. These subscales, in combination, provide an appropriate measure of body image evaluation as they are highly correlated (typically .7 to .8). A z-score derived from the raw scores of each subscale provide a single measure of body image for further analysis.

The Appearance Evaluation subscale has 7 items and measures feelings of physical attractiveness/unattractiveness and satisfaction/dissatisfaction with one's looks. It uses a 5-point Likert scale ranging from 1 to 5. High scorers feel mostly positive and satisfied with their appearance; low scorers have a general unhappiness with their physical appearance. The Appearance Evaluation subscale has a one-month test-retest reliability of .81 for males and .91 for females. Item scores are added so that raw scores obtained for this subscale can range from 7

to 35. In the current study, participant's scores on the Appearance Evaluation subscale ranged from a minimum value of 15 to a maximum value of 35 ($M = 25.73$, $SD = 5.01$).

The Body Areas Satisfaction has 9 items and measures body satisfaction with discrete aspects of one's appearance. It uses a 5-point Likert scale ranging from 1 to 5. High composite scorers are generally content with most areas of their body. Low scorers are unhappy with the size or appearance of several areas. The Body Areas Satisfaction subscale has a one-month test-retest reliability of .86 for males and .74 for females. Item scores are added so that raw scores obtained for this subscale can range from 9 to 45. In the current study, participant's scores on the Body Areas Satisfaction subscale ranged from a minimum value of 20 to a maximum value of 45 ($M = 33.37$, $SD = 6.1$).

Feedback on Physical Appearance Scale (FOPAS); (Tantleff-Dunn, Thompson, & Dunn, 1995)

The Feedback on Physical Appearance Scale (FOPAS; see Appendix B) is a 26-item scale that measures the frequency of verbal and nonverbal commentary with regard to appearance. In the present study, the FOPAS was used as a measure of the messages dancers perceive from their coaches. The FOPAS has an internal consistency of .84, test-retest reliability over a two week period of .82, and was standardized on 398 college students (237 female/161 male). For the present study, participants responded about how often they believed they were the recipients of such verbal and nonverbal commentaries on their appearance from their dance teachers. The FOPAS was normed in the original study using the phrasing of "someone" for each question. For the purpose of the current study, the use of "someone" has been replaced with "dance teacher." Tantleff-Dunn et al. (1995) detailed how they changed the wording of

“someone” to read “significant other” during their validation of the FOPAS to ensure generalizability of the scale. Additionally, two questions on the scale (i.e., someone whistled at you and someone grabbed your rear end), which relate to sexualized nonverbal messages, were removed as deemed not appropriate for the current study.

Using a five-point Likert scale, participants rated the amount of time that the stated behavior occurred. All responses were added together to obtain a total score which can range from 24 to 120. Heuristically, participants scores can be interpreted such that scores falling one standard deviation above the mean can be considered to have a high level of negative feedback and scores falling one standard deviation below the mean can be considered as having a low level of negative feedback. For this analysis, however, the participant’s scores were treated as a continuous variable, with higher scores indicating more negative feedback. For the current study, participant’s scores on the FOPAS ranged from a minimum value of 24 to a maximum value of 71 ($M = 34.64$, $SD = 9.07$).

Body Mass Index for Children and Adolescents

Body Mass Index (BMI) is a number calculated from an individual's weight and height, which was provided by participants’ self-report. BMI is a reliable indicator of body fatness for most children and adolescents. The formula for determining BMI for children and adolescents as set by the CDC is $\text{weight (lb)} / [\text{height (in)}]^2 \times 703$. The resulting BMI number can then be plotted on the Centers for Disease Control and Prevention’s BMI-for-age growth charts to obtain a percentile ranking. Percentile rankings are used to rate subjects into one of four weight categories: underweight (less than 5th percentile), healthy weight (5th percentile to less than 85th percentile), overweight (85th to less than 95th percentile, and obese (equal to or greater than 95th

percentile) (Centers for Disease Control and Prevention). For this analysis, the participant's scores were treated as a continuous variable, with higher scores indicating a higher BMI.

Procedure

Ethical approval for this study was obtained from the Human Subjects Research Committee at Alfred University. Dance studios in Western New York were contacted by the researcher through email or personal contact to ascertain the level of interest for participation. The email that was sent contained introductory information about the researcher, the proposed research, and outlined the time commitment to the studio. Once contact was established with the dance studio owner, groups of students age 13 to 18 were identified. The researcher set up days and times with the dance studio owner where the previously identified groups of students would be available to meet. At the first meeting, the researcher provided information about herself and the proposed research. Informed consent forms, which were to be completed by parents for minors, were distributed and a return date for a second meeting was established. At the second meeting, participants who submitted their signed consent forms were administered the research questionnaire as a group. The researcher remained present during the completion of the measures to answer any questions and ensure participants responded without influence from others.

Chapter 4

Results

The current research utilized a sequential regression analysis to examine the relationship between the perceived verbal and nonverbal messages given by the dance teachers, as measured by the FOPAS, and the dancers' body image, as measured by the MBSRQ (hypothesis 1). It also examined the relationships of competitive level (hypothesis 2) and amount of time practicing dance (hypothesis 3) with the dancers' body image. For all hypotheses, participants' Body Mass Index (BMI) and age were used as control variables. Table 1 includes correlational relationships between variables, as well as mean and standard deviation values for each variable.

Messages from Teachers

Hypothesis 1 was that the verbal and nonverbal messages perceived by the dancer from the teacher will relate to the dancer's body image. This hypothesis was tested via sequential regression. See Table 2 for multiple regression results. The control variables of Body Mass Index ($\beta = -.297, p = .008$) and age ($\beta = -.151, p = .204$), along with the variables of level of dance ($\beta = .360, p = .005$) and hours of dance ($\beta = -.216, p = .110$), were entered in the 1st block (model 1). As a block, these items were significantly related to dancers' body image ($R^2 = .233, p = .001$). The independent variable of teachers' feedback, as measured by the FOPAS, was entered in the 2nd block. The results of the analysis indicate that a significant negative relationship ($\beta = -.396, p = .000$) exists between verbal and nonverbal messages perceived by the dancer from the teacher and a dancer's body image. Therefore, when controlling for the variables in the first block, more negative messages perceived by the dancer from their teacher relate to a more negative body image in the dancer.

Competitive Level

Hypothesis 2 was that students who are involved in dance at the competitive level will demonstrate a stronger relationship between perceived messages and body image than their purely recreational counterparts. To test this hypothesis the interaction variable of level of dance (i.e., competitive versus recreational) times teachers' feedback was added in the 3rd block (model 3) to assess whether level of participation moderates the effect of teachers' feedback on body image. A significant relationship ($\beta = -.036$, $p = .856$) was not demonstrated between these variables. See Table 2 for multiple regression results.

Time in Dance Class

Hypothesis 3 was students who spend more time in dance class will demonstrate stronger relationship between perceived messages and body image. To test this hypothesis the interaction term of hours of dance times coach's feedback was added in the 3rd block to assess whether hours of dance participation moderates the effect of teachers' feedback on body image (model 3). A significant relationship ($\beta = .005$, $p = .956$) was not demonstrated between these variables. See Table 3 for multiple regression results.

When looking wholly at each model, the first model examined the control variables of age, BMI, hours of dance, and level of dance. BMI and level of dance were revealed as significant factors. The second model included the focal independent variable of messages, as measured by the FOPAS. This second model revealed a significant relationship, thus indicating that more negative messages perceived by the dancer from their teacher relate to a more negative body image in the dancer. The third model included the interaction variables, hours of dance and level of dance. For both of the interaction variables, hours of dance and level of dance, no significant

relationship was demonstrated. This indicates that regardless of hours spent dancing or the level of dance of the student, the significant relationship between teacher feedback and body image remains a significant one. For the second and third models, while the Betas changed within each new model, all of the significant relationships with the control variables remained.

Chapter 5

Discussion

All across the country, in every city, in every state it is very likely that you would find at least one dance studio. Students may enroll in dance class as young as 3 years old and may continue to take classes through their high school years. While the number of adolescents across the country who are enrolled in dance class would be hard to calculate, one can only imagine how large of a number it would be. Yet, when the current research involving dancers is examined, this population of dancers is often overlooked.

The current study sought to investigate the relationship that exists between verbal and nonverbal messages from dance teachers and the body image of adolescent dancers, as well as whether or not the level of dance or the amount of time spent in dance class impacted this relationship. As a former dance student and current dance teacher, I was curious as to why the negative stereotype of a thin or anorexic dancer persisted when, as a student of dance, I never felt the pressure to be thin, and as a teacher, I never felt the need to require that from my students. When I turned to the current research, however, most of what I found related to dancers at a pre-professional or professional level who were mainly involved in Ballet, not to the dancers I worked with every week in my classes who were dancing recreationally.

Messages from Teachers

The first hypothesis posited that verbal and nonverbal messages perceived by the dancer from their teacher will have an impact on the dancer's body image. This was found to be the case as results indicated a significant relationship existed between messages from dance teachers

and the body image of adolescent dancers. Dancers who perceive more negative messages from their teachers had a lower body image.

Given the correlational nature of this research, however, the directionality of this relationship is unknown. On one hand, it is possible that the negative messages perceived by the dancer resulted in the dancer having a more negative body image. At the same time, it is also possible that dancers who already have a negative body image may perceive messages from their dance teacher in a more negative light. Still, these findings lend support to previous existing research which denotes that dancers have lower body images (Bettle, Bettle, Neumarker, and Neumarker, 2001; Nascimento et al., 2012; Rivaldi et al., 2003; Rivaldi et al., 2006), that perception of external messages can impact body image (Cash, 2002; Fischer, 1990; Nollen et al., 2006), and that adults/coaches have an impact on adolescents (Bailey, 2006; Francisco et al., 2012; Turman, 2003).

Regardless of the directionality of the relationship, the finding of the significant relationship between perceived messages from dance teachers and dancers' body image is an important one. With the knowledge of the weight that their messages hold, dance teachers might be invested in changing the ways in which they communicate with their students. While the current research examined adolescent dancers, it is possible that this significant relationship could be present at a much younger age. With that thought, it is possible that students who have felt the weight of perceived negative messages might have quit dance before they reached this age.

Level of Dance and Hours Spent Dancing

The second and third hypotheses take a closer look at the level of dance (i.e., competitive or recreational) as well as the amount of time spent in dance class. It was hypothesized that those who participated at a competitive level or those who spent more time in class would demonstrate a stronger relationship between perceived messages from the teacher and their own body image. No significant relationships were determined to exist between these variables.

The current findings suggest that regardless of level of dance participation, the significant relationship of a dance teacher's perceived messages with dancers' body image remains the same. Much of the previous research utilized samples of elite or pre-professional level dancers (Alexias & Dimitropoulou, 2011; Nascimento, et al., 2012; Pierce & Daleng, 1998) and found that dancers at this level view their bodies as tools for which they make an investment that is expected to assure them success, exhibit a higher lifetime prevalence of body dysmorphic disorder, and rate their bodies as significantly more negative than their ideal bodies. In the current research, even those students who noted participation on their studio's competitive team could still be considered as dancing recreationally when compared to the elite or pre-professional dancers used in other research samples. Therefore, the current research adds new information to the existing literature by demonstrating significant relationships between verbal and nonverbal messages given by the dance teacher and their adolescent dancer's body image for recreational dancers, not just elite or professional dancers.

Additionally, it was hypothesized that because a dancer spends more time in dance class she might be more invested in dancing or might have more exposure to messages and therefore a stronger impact of the relationship between messages from their teacher and body image would exist; however, this was not the case. For adolescents, the draw on their time is large, so for

these dancers it could be that any commitment of time they make demonstrates a high level of investment in their dance participation.

It might also be that dancers who are part of their studio's competitive team or those who participate in a large number of dance classes per week might generally have a higher body image. While this element was not a specific point of the current study, analyses revealed this to be true. Dancers on their studio's competitive team demonstrated a higher body image than their noncompetitive counterparts. This possibility could occur as a result of their participation in a number of physically active dance classes each week which allows them a higher level of physical fitness. Or, perhaps, those who are more confident in general about their bodies, chose to be on the team.

Implications

Regardless of the dancer's level or time spent in dance class, a significant relationship was found between the verbal and nonverbal messages given by the dance teacher and the body image of the dancer. Dance teachers are tasked with the goal of making each of their students a strong dancer who is continually growing and developing new skills. To accomplish this task, teachers rely on verbal and nonverbal corrections and feedback which often point to a dancer's specific body area that may be demonstrating improper technique or choreographic intent (e.g., point your toes, straighten your legs, engage your core). Through these specific corrective statements dancers, become aware that their teachers are keenly watching their bodies.

Inherent within the teacher/student relationship is a level of trust and understanding that the comments made by the teacher are for the benefit of making the student a stronger dancer through the improvement of technique for specific dance skills, as well as improvement of a

dancer's ability to demonstrate choreographic intent through their movements. When dealing with the verbal and nonverbal messages and their relation to a students' body image, as detailed in the current study, this relationship takes on a more meaningful role. Perhaps it is when this trust element of the teacher/students relationship is broken that messages given by the teacher may be perceived in a negative light. Now teachers become tasked with not only using feedback to improve their dancers' skills and abilities but also watching how the feedback they give may impact their students' body image.

With the knowledge of this significant relationship, should dance teachers change the way in which they verbally and nonverbally interact with their students? Striking a balance between providing appropriate corrective feedback to help dancers improve their technical skills, while maintaining a positive relationship as to lessen eliminate the negative perception of such messages, becomes a key component for teacher/student interactions.

Dance teachers, like all professionals, regularly attend conferences and conventions or read articles and watch videos with the intent of honing their craft and staying current. Often, this professional development is related to the art of choreography and costuming or the business of dance. The idea of pedagogy, while loosely addressed in terms of teaching dance technique, often falls by the wayside in terms of how to structure a dance class, interact with students, and the art of teaching students. The current study suggests that the role of a dance teacher extends beyond teaching proper dance technique and creating interesting choreography. It is suggested that a dance teacher may play a significant role in the establishment of their students' body image.

In previous research by Whisenhunt et al. (2008), it was demonstrated that cheerleading

coaches who attended a training to reduce the pressure for thinness and to identify the symptoms of eating disorders within their students reported making changes in their coaching. The reaction of their students' to this change, however, was not studied. It is realistic to think that a similar training could occur with dance teachers through already existing conventions and teacher training models, with the impact of such training measured by future research. For, even if the directionality of the measured relationship between a dance teacher's messages and a dancer's body image were due to dancers with already low body image perceiving messages in a negative more negative way, dance teachers might take a more thoughtful and careful approach with the messages they give to their dancers.

Previous research by Francisco, et al. (2012) which examined specific predictors of eating disorders among elite and nonelite ballet dancers and gymnasts revealed that the degree of pressure to be thin was more important than the competitive level when assessing disordered eating among these aesthetic athletes. Their study also revealed that the specific act of practicing either gymnastics or ballet was the best predictor of disordered eating, suggesting that regardless of the competitive level of the participants the pressure to be thin inherent in these activities can lead to disordered eating. The current research specifically relates to this previous research by providing a possible factor, messages from dance teachers, that could be contributing to the pressure to be thin and ultimately leading to a dancer's negative body image and disordered eating.

Limitations

A number of limitations exist for the current study. The first lies in the basic demographic makeup of the participant group which largely included White females from the

Western New York area who are believed to fall within the middle to high SES range. To generalize the results of the current research to a larger group of dancers, a sample including participants from varying gender, age, racial, and geographic backgrounds would be needed.

Other limitations of the current study surround the administration procedures. First, in terms of the limitation of the number of participants, while there were enough participants to appropriately conduct the necessary statistical analyses, a participant group of only 78 can be considered small in terms of generalizability to larger groups. The current procedure relied on the dancers to return a signed consent form in order to participate. During the time between the initial presentation by the researcher and the return of the signed consent, there were a number of limiting factors which could have come into place. Dancers may not have been able to effectively communicate the intent of the research, as described by the researcher, and thus parents may have not given consent for their child to participate. Additionally, some dancers appeared to have had difficulty remembering to return their signed consent form.

Second, there was the limitation of soliciting individual, participant-specific responses. Dancers could have used the time between meetings with the researcher to think about and construct responses with their peers or even their dance teachers about the topic of body image. In the event that these thoughts or discussions occurred, there is a potential that individual responses could have been influenced. While this can be considered a possibility, there is no indication that this occurred.

Additionally, a limitation involves the use of preexisting measures. While the measures used in the current study were picked because of their relation to the research question and their strong psychometric properties, there are some questions which appeared unrelated to the current

research. Additionally, there are some elements of dance practice, such as teacher's choice of costumes, music, and formations which could be construed as nonverbal messages, which were not addressed within the measures utilized for the current research. Also, the verbal messages that were measured for the current study did not fully encompass all of the regular verbal communications of corrections and feedback which regularly occurs as a normal part of the communications between dance teachers and their students.

When considering the statistical methods of this research, inherent limitations exist within the confines of a correlational research design. Correlational research does not allow for the directionality of cause and effect of the variables. For the current research it remains unclear whether the feedback from dance teachers caused the negative body image of some participants or whether because of a preexisting negative body image, feedback given by the dance teacher to the student was received in a negative light.

Future Research

Given the limited participant pool -- Caucasian females from Western New York enrolled in dance class -- future research in this area may wish to include a more diverse and larger participant group which would allow for a stronger generalization of the results. Specifically, a larger sample which included participants from more diverse racial, geographic, and economic groups would be prudent. Additionally, when considering the generalizability of these results, future research may wish to examine the degree to which the results of this current study could generalize to participants of other aesthetic sports, such as gymnastics or figure skating, or to other sports in general.

Additionally, there are other nonverbal teacher factors which could possibly relate to a dancers' body image, namely, the ideas of costuming or placement in formations. These could be considered other kinds of nonverbal messages which dancers use to perceive negative or positive relationships with their teacher. Due to the use of preexisting measures these additional factors were not investigated. Future research may create a questionnaire where these issues are addressed or allow for a write-in response where dancers could elect them as areas in which they receive feedback from their teachers.

The consideration for other types of verbal messages such as corrections and corrective feedback given by a dance teacher exists; however, due to the use of preexisting measures for this research these types of verbal messages were not included. As dance teachers regularly communicate with their students through verbal corrections and feedback, future research may wish to examine the impact of this type of teacher/student communication.

It has been reported that an individuals' body image can change over time. These changes can be the result of a combination of factors both external and internal. Given the changing nature of an individuals' body image, a longitudinal research design would help to establish the causality of the relationship demonstrated by the current study. Do dancers perceive more negative messages because they already have a negative body image or do the messages from their dance teacher cause their negative body image? With a better understanding of the causality of the relationship, stronger practices to limit the negative effects could be put into place. By knowing the role that they play in the establishment of their students' body image, dance teachers might choose to take a more careful approach in their interactions with their students.

Conclusions

To summarize, the current research sought to investigate the relationship that exists between verbal and nonverbal messages from dance teachers and the body image of adolescent dancers and whether or not the level of dance or the amount of time spent in dance class impacted this relationship. The results of the study indicate that a significant negative relationship existed between verbal and nonverbal messages perceived by the dancer from the teacher and a dancer's body image. For all dancers, more negative messages perceived by the dancer from their teacher relate to a more negative body image in the dancer.

Additionally, the level of dance of the dancer as well as the time spent in dance class was examined for possible interactions. The analysis revealed no significant interactions for these two variables. While no significant interaction for level of dance or hours spent dancing was found, it is through the lack of interaction that provides a stronger impact for the significant relationship found between teacher feedback on a dancer's body image. Namely, regardless of level of dance or time spent in dance class a significant negative relationship exists between the verbal and nonverbal messages perceived by the dancer from the teacher and a dancer's body image. These results ultimately suggest that dance teachers should be aware of and take care with the verbal and nonverbal messages they convey to their dancers.

References

- Alexias, G., & Dimitropoulou, E. (2011). The body as a tool: Professional classical ballet dancers' embodiment. *Research in Dance Education*, 12(2), 87-104.
doi:10.1080/14647893.2011.575221
- American Psychological Association (2011). Eating disorders. Retrieved from <http://www.apa.org/helpcenter/eating.aspx>.
- Bailey, R. (2006). Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health*, 76(8), 379-401. doi: 10.1111/j.1746-1561.2006.00132.x
- Bettle, N., Bettle, O., Neumarker, U., & Neumarker, K-J. (2001). Body image and self-esteem in adolescent ballet dancers. *Perceptual and Motor Skills*, 93(1), 297-309.
doi:10.2466/pms.2001.93.1.297
- Boone, E. M., & Leadbeater, B. J. (2006). Game on: Diminishing risks for depressive symptoms in early adolescence through positive involvement in team sports. *Journal of Research on Adolescence*, 16(1), 79-90. doi:10.1111/j.1532-7795.2006.00122.x
- Cash, T. (2002). Cognitive-Behavioral Perspectives on Body Image. In T. Cash & T. Pruzinsky (Eds.), *Body Image: A Handbook of Theory, Research, & Clinical Practice* (pp. 38-47). New York: The Guilford Press.
- Cash, T.F., Winstead, B.W., & Janda, L.H. (1986). The great American shape-up: Body image survey report. *Psychology Today*, 20(4), 30-37. <https://www.psychologytoday.com/>
- Centers for Disease Control and Prevention (2010). National health and nutrition examination survey. Retrieved from <http://www.cdc.gov/nchs/nhanes.htm>.
- Clark, L., & Tiggemann, M. (2007). Sociocultural influences and body image in 9- to 12-year-

- old girls: The role of appearance schemas. *Journal of Clinical Child and Adolescent Psychology*, 36(1), 76-86. doi:10.1080/15374410709336570
- Clay, D., Vignoles, V. L., & Dittmar, H. (2005). Body image and self-esteem among adolescent girls: Testing the influence of sociocultural factors. *Journal of Research on Adolescence*, 15(4), 451-477. doi:10.1111/j.1532-7795.2005.00107
- Corson, P. W., & Andersen, A. E. (2004). Body image issues among boys and men. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice* (pp. 219-225). New York, NY: Guilford Press.
- Davis, C. (2004). Body image and athleticism. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice* (pp. 219-225). New York, NY: Guilford Press.
- Dawkins, M. P., Williams, M. M., & Guilbault, M. (2006). Participation in sports: Risk or protective factors for drug use among black and white students? *Journal of Negro Education*, 75(1), 25-33. <http://www.journalnegroed.org/>
- De Bruin, A. P., Bakker, F. C., & Oudejans, R. D. (2009). Achievement goal theory and disordered eating: Relationships of disordered eating with goal orientations and motivational climate in female gymnasts and dancers. *Psychology of Sport and Exercise*, 10(1), 72-79. doi:10.1016/j.psychsport.2008.07.002
- Dodge, T., & Jaccard, J. (2002). Participation in Athletics and Female Sexual Risk Behavior: The Evaluation of Four Causal Structures. *Journal of Adolescent Research*, 17(1), 42-67. doi:10.1177/0743558402171003
- Downey, D. J., Reel, J. J., SooHoo, S., & Zerbib, S. (2010). Body image in belly dance:

- Integrating alternative norms into collective identity. *Journal of Gender Studies*, 19(4), 377-393. doi:10.1080/09589236.2010.514209
- Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14(1), 10-43. doi:10.1177/0743558499141003
- Fauth, R. C., Roth, J. L., & Brooks-Gunn, J. (2007). Does the neighborhood context alter the link between youth's after school time activities and developmental outcomes? A multilevel analysis. *Developmental Psychology*, 43(3), 760-777. doi:10.1037/0012-1649.43.3.760
- Field, T., Diego, M., & Sanders, C. E. (2001). Exercise is positively related to adolescents' relationships and academics. *Adolescence*, 36(141), 105-109. Retrieved from <http://ezproxy.alfred.edu:2048/login?url=http://search.proquest.com/docview/195941959?accountid=8263>
- Fisher, S. (1990). The evaluation of psychological concepts about the body. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: Development, deviance, and change*. (pp. 3-20). New York, NY: The Guilford Press.
- Ford, J. A. (2007). Substance use among college athletes: A comparison based on sport/team affiliation. *Journal of American College Health*, 55(6), 367-373. doi:10.3200/JACH.55.6.367-373
- Francisco, R., Alarcao, M., & Narciso, I. (2012). Aesthetic sport as high-risk context for eating disorders – young elite dancers and gymnasts perspectives. *Spanish Journal of Psychology*, 15(1), 265-274. http://dx.doi.org/10.5209/rev_SJOP.2012.v15.n1.37333

- Francisco, R., Narciso, I., & Alarcao, M. (2012). Specific predictors of disordered eating among elite and non-elite gymnasts and ballet dancers. *International Journal of Sport Psychology*, 43(6), 479-502. doi: 10.7352/IJSP
- Fredricks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology*, 42(4), 698-713. doi:10.1037/0012-1649.42.4.698
- Gardner, R. M., & Moncrieff, C. (1988). Body image distortion in anorexics as a nonsensory phenomenon: A signal detection approach. *Journal of Clinical Psychology*, 44(2), 101-107. doi: 10.1002/1097-4679
- Gardner, R. M., Morrell, J., Watson, D., & Sandoval, S. (1989). Subjective equality and just noticeable differences in body-size judgments by obese persons. *Perceptual and Motor Skills*, 69, 595-604. doi:10.2466/pms.1989.69.2.595
- Givvin, K. B. (2001). Goal orientation of adolescents, coaches, and parents: Is there a convergence of beliefs? *Journal of Early Adolescence*, 21(2), 227-247. doi:10.1177/0272431601021002005
- Gore, S., Farrell, F., & Gordon, J. (2001). Sports involvement as protection against depressed mood. *Journal of Research on Adolescence*, 11(1), 119-130. doi:10.1111/1532-7795.00006
- Hoch, A. Z., Pajewski, N. M., Moraski, L., Carrera, G. F., Wilson, C. R., Hoffman, R. G., Schimke, J. E., & Gutterman, D. D. (2009). Prevalence of the female athlete triad in high school athletes and sedentary students. *Clinical Journal of Sports Medicine*, 19(5), 421-428. doi:10.1097/JSM.0b013e3181b8c136

Hoch, A. Z., Papanek, P., Szabo, A., Widlansky, M. E., Schimke., J. E., & Gutterman, D. D.

(2011). Association between the female athlete triad and endothelial dysfunction in dancers. *Clinical Journal of Sports Medicine*, 21(2), 119-125.

doi:10.1097/JSM.0b013e3182042a9a

Hubbard, S. T., Gray, J. J., & Parker, S. (1998). Differences among women who exercise for

“food related” and “non-food related” reasons. *European Eating Disorders Review*, 6, 255-265. doi:10.1002/(SICI)1099-0968(199812)6:4<255::AID-ERV262>3.0.CO;2-G

Jaffe, L., & Mahle-Lutter, J. (1995). Adolescent girls: Factors influencing low and high body image. *Melpomene Journal*, 14(2), 14-22.

https://www.periodicals.com/stock_e/m/ttl59690.html

Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study.

Developmental Psychology, 40(5), 823-835. doi:10.1037/0012-1649.40.5.823

Jones, D. C., & Crawford, J. K. (2005). Adolescent boys and body image: weight and

muscularity concerns as dual pathways to body dissatisfaction. *Journal of Youth and Adolescence*, 34(6), 629-636. doi: 10.1007/s10964-005-8951-3

Jones, D. C., Vigfusdottir, T. H., & Lee, Y. (2004). Body image and the appearance culture

among adolescent girls and boys : An examination of friend conversations, peer criticisms, appearance magazines, and the internalization of appearance ideals. *Journal of Adolescent Research*, 19(3), 323-339. doi: 10.1177/0743558403258847

Kearney-Cooke, A. (2004). Familial influences on body image development. In T. F. Cash & T.

Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice* (pp. 99-107). New York, NY: Guilford Press.

Kerr, G., Berman, E., & de Souza, M. J. (2006). Disordered eating in women's gymnastics:

Perspectives of athletes, coaches, parents, and judges. *Journal of Applied Sport*

Psychology, 18(1), 28-43. doi: 10.1080/10413200500471301

Krentz, E. M. (2011). Sports-related correlates of disordered eating in aesthetic sports.

Psychology of Sport and Exercise, 12(4), 375-382. doi:10.1016/j.psychsport.2011.03.004

Lehman, S. J., & Koerner, S. S. (2004). Adolescent women's sports involvement and sexual

behavior/health: A process-level investigation. *Journal of Youth and Adolescence*, 33(5),

443-455. doi:10.1023/B:JOYO.0000037636.22596.41

Levine, M. P., & Smolak, L. (2004). Body image development in adolescence. In T. F. Cash &

T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice*

(pp. 74-82). New York, NY: Guilford Press.

Levinson, R., Powell, B., & Steelman, L. C. (1986). Social location, significant others and body

image among adolescents. *Social Psychology Quarterly*, 49(4), 330-337.

<http://www.asanet.org/research-and-publications/journals/social-psychology-quarterly>

McCabe, M. P., & Ricciardelli, L. A. (2001). Parent, peer, and media influences on body image

and strategies to both increase and decrease body size among adolescent boys and girls.

Adolescence, 36(142), 225-240. Retrieved from

<http://ezproxy.alfred.edu:2048/login?url=http://search.proquest.com/docview/195930876>

?accountid=8263

McKay-Parks, P. S., & Read, M. A. (1997). Adolescent male athletes: Body image, diet, and

exercise. *Adolescence*, 32(127), 593-602. Retrieved from

http://go.galegroup.com/ps/i.do?id=GALE%7CA20413252&v=2.1&u=suny_ceramics&it

=r&p=AONE&sw=w&asid=5f250ed1a2c73f67cb1c0ab1d8e8d9aa

Minnesota University Center for Research on Girls and Women in Sport (1997). *Physical activity and sport in the lives of girls. Physical & mental health dimensions from an interdisciplinary approach*. Minneapolis, MN.

Nascimento, A. L., Luna, J. V., & Fontenelle, L. F. (2012). Body dysmorphic disorder and eating disorders in elite professional female ballet dancers. *Annals of Clinical Psychiatry*, 24(3), 191-194. <https://www.aacp.com/issues/>

National Institute of Mental Health (2010). Eating disorders among children. http://www.nimh.nih.gov/statistics/1EAT_CHILD.shtml

Newman, D. L., Sontag, L. M., & Salvato, R. (2006). Psychosocial aspects of body mass and body image among rural american indian adolescents. *Journal of youth and Adolescence*, 35(2), 281-291. doi:10.1007/s10964-005-9011-8

Nichols, J. F., Rauh, M. J., Lawson, M. J., Ji, M., & Barkai, H-S. (2006). Prevalence of the female athlete triad syndrome among high school athletes. *Archive of Pediatric & Adolescent Medicine*, 160(2), 137-142. doi:10.1001/archpedi.160.2.137

Nollen, N., Kaur, H., Pulvers, K., Choi, W., Fitzgibbon, M., Li, C., ... & Ahluwalia, J. (2006). Correlates of ideal body size among black and white adolescents. *Journal of Youth and Adolescents*, 35(2), 293-301. doi:10.1007/s10964-005-9024-3

Olivardia, R. (2004). Body image and muscularity. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice* (pp. 210-218). New York, NY: Guilford Press.

Otis, C. L., Drinkwater, B., Johnson, M., Loucks, A., & Wilmore, J. (1997). The female athlete

- triad. *Medicine & Science in Sports & Exercise*, 29(5), i-ix. doi:10.1097/00005768-199705000-00037
- Pierce, E. F., & Daleng, M. L. (1998). Distortion of body image among elite female dancers. *Perceptual and Motor Skills*, 87(3, Pt 1), 769-770. doi: 10.2466/pms.1998.87.3.769
- Pollatou, E., Bakali, N., Theodorakis, Y., & Goudas, M. (2010). Body image in female professional and amateur dancers. *Research in Dance Education*, 11(2), 131-137. doi:10.1080/14647893.2010.482980
- Price, B. R., & Pettijohn, T. F. II (2006). The effect for ballet dance attire on and self-perceptions of female dancers. *Social Behavior and Personality*, 34(8), 991-998. <http://dx.doi.org/10.2224/sbp.2006.34.8.991>
- Radell, S. A., Adame, D. D., & Cole, S. P. (2002). Effect of teaching with mirrors on body image and locus of control in women college ballet dancers. *Perceptual and Motor Skills*, 95(3, Pt2), 1239-1247. doi:10.2466/pms.2002.95.3f.1239
- Ravaldi, C., Vannacci, A., Bolognesi, E., Mancini, S., Faravelli, C., & Ricca, V. (2006). Gender role, eating disorder symptoms, and body image concerns in ballet dancers. *Journal of Psychosomatic Research*, 61(4), 529-535. doi:10.1016/j.jpsychores.2006.04.016
- Ravaldi, C., Vannacci, A., Zucchi, T., Mannucci, E., Cabras, P. L., Boldrini, M., ... & Ricca, V. (2003). Eating disorders and body image disturbances among ballet dancers, gymnasium users and body builders. *Psychopathology*, 36(5), 247-254. doi:10.1159/000073450
- Rhea, D. J., & Lantz, C. D. (2004). Violent, delinquent, and aggressive behaviors of rural high school athletes and non-athletes. *Physical Educator*, 61(4), 170-176. <https://js.sagamorepub.com/pe>

- Ricciardelli, L. A., McCabe, M. P., & Banfield, S. (2000). Sociocultural influences on body image and body change methods in adolescent males. *Journal of Adolescent Health*, 26(1), 3-4. doi:10.1016/S1054-139X(99)00107-X
- Richman, E. L., & Shaffer, D. R. (2000). "If you let me play sports" How might sport participation influence the self-esteem of adolescent females? *Psychology of Women Quarterly*, 24, 189-199. doi: 10.1111/j.1471-6402.2000.tb00200.x
- Savage, M. P., & Holcomb, D. R. (1999). Adolescent female athletes' sexual risk-taking behaviors. *Journal of Youth and Adolescence*, 28(5), 595-602. doi:10.1023/A:1021658727236
- Schneider, D., & Greenberg, M. R. (1992). Choice of exercise: A predictor of behavioral risks? *Research Quarterly for Exercise and Sport*, 63(3), 231-237. doi: 10.1080/02701367.1992.10608738
- Skemp-Arlt, K. M. (2006). Body image dissatisfaction and eating disturbances among children and adolescents: Prevalence, risk factors, and prevention strategies. *Journal of Physical Education, Recreation, & Dance*, 77(1), 45-51. doi: 10.1080/07303084.2006.10597813
- Social Development Commission in Milwaukee, Wisconsin (1992). *Fighting back: The cultural context of drug and alcohol use among youth*. ERIC/CASS, Resources in Education.
- Stinton, M. M., & Birch, L. L. (2006). Individual and sociocultural influences on pre-adolescent girls' appearance schemas and body dissatisfaction. *Journal of Youth and Adolescence*, 35(2), 157-167. doi: 10.1007/s10964-005-9007-4
- Sundgot-Borgen, J. (1994). Risk and trigger factors for the development of eating disorders in female elite athletes. *Medicine and Science in Sports and Exercise*, 26(4), 414-419. Doi:

<http://dx.doi.org/10.1249/00005768-199404000-00003>

- Swami, V., & Harris, A. S. (2012). Dancing toward positive body image? Examining body-related constructs with ballet and contemporary dancers at different levels. *American Journal of Dance Therapy*, 34(1), 39-52. doi: 10.1007/s10465-012-9129-7
- Swami, V., & Tovee, M. J. (2009). A comparison of actual-ideal weight discrepancy, body appreciation, and media influences between street-dancers and non-dancers. *Body Image*, 6(4), 304-307. doi:10.1016/j.bodyim.2009.07.006
- Tantleff-Dunn, S., Thompson, J.K., & Dunn, M.E. (1995). The Feedback on Physical Appearance Scale (FOPAS): Questionnaire development and psychometric evaluation. *Eating Disorders: The Journal of Treatment and Prevention*, 3, 332-341. doi: 10.1080/10640269508250063
- Thompson, J. K., & Gardner, R. M. (2002). *Measuring perceptual body image among adolescents and adults*. In T. Cash & T. Pruzinsky (Eds.), *Body Image: A Handbook of Theory, Research, & Clinical Practice* (pp. 135-141). New York: The Guilford Press.
- Thompson, M. A., & Gray, J. J., (1995). Development and validation of a new body-image assessment scale. *Journal of Personality Assessment*, 64(2), 258-269. doi: 10.1207/s15327752jpa6402_6
- Turman, P. D. (2003). Athletic coaching from an instructional communication perspective: The influence of coaching experience on high school wrestlers' preferences and perceptions of coaching behaviors across a season. *Communication Education*, 52(2), 73-86. doi: 10.1080/03634520302465
- Urdapilleta, I., Cheneau, C., Masse, L., & Blanchet, A. (2007). Comparative study of body

- image among dancers and anorexic girls. *Eating and Weight Disorders*, 12(3), 140-146.
doi: 10.1007/BF03327641
- Vicario, T., & Chambliss, C. (2001). *The benefits associated with dance education for adolescent girls*. ERIC/CASS, Resources in Education.
- Vicario, T., Henninger, E., & Chambliss, C. (2001). *The correlates of dance education among adolescent girls*. ERIC/CASS, Resources in Education.
- Wertheim, E. H., Paxton, S. J., & Tilgner, L. (2004). Test-retest reliability and construct validity of contour drawing rating scale scores in a sample of early adolescent girls. *Body Image*, 1(2), 199-205. doi:10.1016/S1740-1445(03)00024-X
- Whisenhunt, B. L., Williamson, D. A., Drab-Hudson, D. L., & Walden, H. (2008). Intervening with coaches to promote awareness and prevention of weight pressures in cheerleaders. *Eating and Weight Disorders*, 13(2), 102-110. doi: 10.1007/BF03327610
- Williamson, D. A., Stewart, T. M., White, M. A., & York-Crowe, E. (2002). An Information-processing perspective on body image. In T. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, & clinical practice* (pp. 38-47). New York: The Guilford Press.
- Zoletic, E., & Durakovic-Belko, E. (2009). Body image distortion, perfectionism, and eating disorder symptoms in risk group of female ballet dancers and models in control group of female students. *Psychiatria Danubina*, 21(3), 302-309.
http://www.hdbp.org/psychiatria_danubina/about.html

Table 1

Pearson Correlation of Variables

	Body Image	Age	BMI	Hour	Level	FOPAS	Level x FOPAS	Hours x FOPAS
Body Image	1.00	--	--	--	--	--	--	--
Age	-.266	1.00	--	--	--	--	--	--
BMI	-.342	.321	1.00	--	--	--	--	--
Hours	-.109	.406	.114	1.00	--	--	--	--
Level	.187	.188	.079	.561*	1.00	--	--	--
FOPAS	-.423	.298	.273	.269	.252	1.00	--	--
Level x FOPAS	-.359	.242	.119	.228	.129	.798*	1.00	--
Hours x FOPAS	.000	.029	-.122	.129	.031	.050	.583*	1.00
Mean	0.0	14.71	21.008	8.933	.60	0.0	.123	.265
SD	.948	1.521	3.267	6.113	.493	1.0	.778	1.035

Note. BMI = Body Mass Index; FOPAS = Feedback on Physical Appearance Scale

* = $p < .05$

Table 2

Multiple Regression Analysis for Variables Predicting Body Image in Adolescent Dancers Including Level of Dance Participation

	Model 1				Model 2				Model 3			
	B	SE	Beta	Sig.	B	SE	Beta	Sig.	B	SE	Beta	Sig.
Age	-.094	.073	-.151	.204	-.052	.068	-.084	.445	-.052	.069	-.083	.452
BMI	-.086	.031	-.297	.008	-.064	.029	-.220	.034	-.065	.030	-.223	.035
Hours	-.033	.021	-.216	.110	-.028	.019	-.180	.148	-.028	.019	-.177	.158
Level	.692	.239	.360	.005	.810	.221	.421	.000	.803	.226	.417	.001
FOPAS					-.375	.098	-.396	.000	-.352	.161	-.371	.032
Level x FOPAS									-.036	.197	-.030	.856
R-square Change		.233		.001		.131		.000		.000		.856

Note. Age = participant self report of age; BMI = Body Mass Index calculated from participant self report of height and weight; Hours = participant self report of hours spent in dance class per week; Level = participant self report of participation of their studio's competitive team; FOPAS = Feedback on Physical Appearance Scale.

Table 3

Multiple Regression Analysis for Variables Predicting Body Image in Adolescent Dancers Including Number of Hours of Weekly Dance Participation

	Model 1				Model 2				Model 3			
	B	SE	Beta	Sig.	B	SE	Beta	Sig.	B	SE	Beta	Sig.
Age	-.094	.073	-.151	.204	-.052	.068	-.084	.445	-.052	.069	-.084	.448
BMI	-.086	.031	-.297	.008	-.064	.029	-.220	.034	-.063	.030	-.219	.038
Hours	-.033	.021	-.216	.110	-.028	.019	-.180	.148	-.028	.019	-.180	.152
Level	.692	.239	.360	.005	.810	.221	.421	.000	.810	.223	.421	.001
FOPAS					-.375	.098	-.396	.000	-.376	.099	-.396	.000
Hours x FOPAS									.005	.089	.005	.956
R-square Change		.233		.001		.131		.000		.000		.956

Note. Age = participant self report of age; BMI = Body Mass Index calculated from participant self report of height and weight; Hours = participant self report of hours spent in dance class per week; Level = participant self report of participation of their studio's competitive team; FOPAS = Feedback on Physical Appearance Scale

Appendix A

Demographic Questionnaire

Please respond to the following questions:

Age: _____

Birthdate: _____

Sex: _____

Race:

_____ White

_____ Black or African American

_____ Asian or Native Hawaiian/other Pacific Islander

_____ Hispanic or Latino

_____ Multiracial

_____ Other

Height: _____

Weight: _____

On average, how many hours per week do you participate in dance class? _____

Are you a member of your studio's competitive team? _____

Appendix B

Feedback on Physical Appearance Scale (FOPAS)

Sometimes people say or do things that make us feel good, bad, or just more self-conscious about our appearance. Please read each item and rate how often you think you have been the recipient or target of such behavior. Using the following scale circle the number that is closest to the amount that the behavior occurs:

Never 1	Seldom 2	Sometimes 3	Often 4	Always 5
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The following items refer to experiences that make you feel bad about your body.

17	Your dance teacher suggested a gym to work out in.	1	2	3	4	5
18	Your dance teacher asked if you've gained some weight.	1	2	3	4	5
19	Your dance teacher suggested that you should dress differently.	1	2	3	4	5
20	Your dance teacher made some facial expression when looking at your body.	1	2	3	4	5
21	Your dance teacher watched closely what you ate.	1	2	3	4	5
22	Your dance teacher suggested a new diet that's available.	1	2	3	4	5
23	Your dance teacher called you "fatso" (or something similar).	1	2	3	4	5
24	Your dance teacher did not offer you a treat.	1	2	3	4	5
25	Your dance teacher said, "You look like you've lost weight."	1	2	3	4	5
26	Your dance teacher commented on your outfit.	1	2	3	4	5
27	Your dance teacher said. "Something about you looks different, but I can't figure out what it is.	1	2	3	4	5
28	Your dance teacher asked if you were younger or older than you were.	1	2	3	4	5
29	Your dance teacher asked if you've been dieting.	1	2	3	4	5
30	Your dance teacher suggested that you were a larger/smaller size than you were.	1	2	3	4	5
31	Your dance teacher grabbed your waist.	1	2	3	4	5

32	Your dance teacher gave you the "once over glance."		1	2	3	4	5
33	Your dance teacher asked if you've been exercising lately.		1	2	3	4	5
34	Your dance teacher suggested you should eat more.		1	2	3	4	5
35	Your dance teacher called you "bones," "slim," or something similar.		1	2	3	4	5
36	Your dance teacher asked you how much you weigh.		1	2	3	4	5
37	Your dance teacher avoided looking at you.		1	2	3	4	5
38	Your dance teacher never said anything good or bad about your body.		1	2	3	4	5
39	Your dance teacher watched what food you purchased.		1	2	3	4	5
40	Your dance teacher focused comments on non-weight-related areas (i.e., hair, eyes)		1	2	3	4	5

Curriculum Vitae

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Education

C.A.S	Alfred University, Alfred, N.Y.	2009
M.A.	Alfred University, Alfred, N.Y.	2007
B.A.	State University of New York at Geneseo, Geneseo, N. Y.	2005

Professional Experiences

School Psychologist	Clarence Central School District, Clarence, NY	Current
School Psychologist	Lewiston-Porter Central School District, Youngstown, NY	2015-2017
School Psychologist	Grand Island Central School District, Grand Island, NY	2013-2015
School Psychologist	Grand Island Central School District, Grand Island, NY	Winter 2013
Long Term Substitute	Kenmore-Town of Tonawanda School District, Kenmore, NY	Fall 2012
Long Term Substitute	Grand Island Central School District, Grand Island, NY	Spring 2011
Long Term Substitute	Kenmore-Town of Tonawanda School District, Kenmore, NY	Fall 2010
Long Term Substitute	Kenmore-Town of Tonawanda School District, Kenmore, NY	Spring 2010
Adjunct Professor	Alfred State College, Alfred, NY	Fall 2007
Adjunct Professor	Trocaire College, Buffalo, NY	Summer 2007