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Tone it Down: How Fitness Instructors' Motivational Comments Shape Women's Body Satisfaction

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Two-hundred and three college women participated in a 16-minute strength and conditioning group fitness class. Participants were randomly assigned to a class that featured either appearance-focused motivational comments by the instructor (e.g., "Blast that cellulite!") or function-focused comments (e.g., "Think of how strong you are getting!"). Body satisfaction from pre-test to post-test increased overall, but those in the function-focused (as opposed to appearance-focused) condition experienced a significantly greater increase in body satisfaction. A similar pattern was observed for positive affect. Additionally, those in the function-focused condition described the class in more positive terms and reported experiencing less body surveillance during the class. These findings are consistent with research suggesting that exercise can improve mood and body satisfaction, but also suggest that a more function-focused class can lead to even greater improvements. The motivational comments fitness instructors use may have a notable impact on women's mood, body satisfaction, and body surveillance.

Keywords: body image, body satisfaction, body surveillance, exercise, group fitness, objectification

Among the many intervention techniques designed to reduce body dissatisfaction in women, exercise stands out for its generally consistent positive effects (for a meta-analytic review, see Hausenblas & Fallon, 2006). Yet from a psychological perspective, not all fitness approaches are created equal. Exercise has been called a double-edged sword for women when it comes to body image

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(O'Hara, Cox, & Amorose, 2014), as some types of exercise seem to improve body esteem, whereas others have the potential to lower it. Fitness contexts that emphasize the need to achieve (or the *possibility of* achieving) an often unattainable body ideal could leave women more dissatisfied with their bodies, reducing or even reversing the typical benefits of exercise on body image. In the current study, we experimentally examined the impact of instructor-generated motivational comments on women taking a group exercise class by comparing the impact of appearance-focused and function-focused versions of the same instructor script.

Objectification and Fitness Outcomes

Objectification theory (Fredrickson & Roberts, 1997) provides a framework for understanding why appearance-focused fitness could negatively affect women's body image. According to this theory, a chronic cultural emphasis on women's appearance results in a phenomenon called *self-objectification*. Self-objectification (often referred to as *body surveillance*) refers to the internalization of a third-person perspective on one's body. In other words, self-objectification leads a woman to focus on how her body looks to others, instead of what her body is doing. This type of body surveillance is associated with a range of negative psychological outcomes in women, including greater body shame, greater body dissatisfaction, and increased eating disordered attitudes and behaviors (Calogero, 2009; Calogero, Davis, & Thompson, 2005; Kozee & Tylka, 2006; McKinley, 1998, 2006a, 2006b; McKinley & Hyde, 1996; Muehlenkamp & Saris-Baglama, 2002; Tylka & Hill, 2004). In terms of fitness, self-objectification is negatively associated with exercise quality and adherence. Women with high levels of self-objectification experience more interruptions of the flow state (i.e., the feeling of being completely immersed in and focused on what one is doing) while exercising, and report exercising less often than their counterparts with low levels of self-objectification (Greenleaf, 2005; Melbye, Tenenbaum, & Eklund, 2007).

From the perspective of objectification theory, women who view exercise as a means to increase health and fitness may fare better than those who exercise primarily as a means to change the appearance of their body. The Reasons for Exercise Scale (Silberstein, Striegel-Moore, Timko, & Rodin, 1988) was initially developed to explore gender differences in exercise motivation. However, since its initial publication, numerous researchers have employed the scale (or the more recent Function of Exercise Scale; DiBartolo, Lin, Montoya, Neal, & Shaffer, 2007) to examine correlations between appearance-focused motivations for exercise and body image outcomes. Appearance-focused reasons for exercise have been linked with body dissatisfaction and disordered eating behaviors (DiBartolo et al., 2007; McDonald & Thompson, 1992; Prichard & Tiggemann, 2008; Strelan, Mehaffey, & Tiggemann, 2003; Tiggemann & Williamson, 2000; Tylka & Homan, 2015; Vinkers, Evers, Adriaanse, & de Ridder, 2012), even when controlling for body mass (Cash, Novy, & Grant, 1994). In one survey of young women in Australia (Strelan et al., 2003), researchers found that appearance-motivated exercise was associated with increases in body dissatisfaction and self-objectification, and that participants' reasons for exercise mediated the association between self-objectification and body image. Similarly, Vinkers et al. (2012) found that appearance-motivated exercise partially mediated the association between

body dissatisfaction and disordered eating symptoms. Among midlife women, motives to exercise related to body shape or weight loss were associated with greater negative affect in response to exercise, as well as lower participation in physical activities (Segar, Spruijt-Metz, & Nolen-Hoeksema, 2006).

Objectifying Cues in Fitness Classes

Multiple aspects of group fitness classes could contribute to self-objectification in women. First, fitness classes present environments riddled with opportunities for social comparison, as students can generally see themselves, the instructor, and fellow students in a mirror while exercising. Furthermore, because the body ideal is out of reach for most women, contexts that highlight that ideal as a goal are likely to result in increased body-related social comparisons (e.g., Bessenoff, 2006). Not surprisingly, appearance-related upward comparisons (i.e., comparing yourself to someone viewed as superior on a given attribute) are associated with body image disturbance in women (Myers & Crowther, 2009). Self-objectification and body comparisons may feed off each other, with self-objectification driving more attention toward other women's bodies, in addition to one's own (Tylka & Sabik, 2010).

Other potentially objectifying cues in fitness classes include the apparel of the instructor, the presence of mirrors in the classroom, and the type of language used by the instructor. One study (Raedeke, Focht, & Scales, 2007) examined the effects of instructor attire, type of comments (health vs. appearance-focused), and the presence of mirrors in the studio. However, instructor attire (form fitting vs. conservative) was not manipulated independently of appearance-focused commentary. The authors found no effect of the presence of mirrors, but for conditions in which the instructor wore loose-fitting clothing and emphasized health outcomes, students reported higher positive affect post-exercise. A different study (O'Hara et al., 2014) found mixed results regarding the effect of instructor emphasis on appearance. The impact on self-objectification varied according to participants' reasons for exercise, with those who exercised for health reasons showing less state self-objectification in the appearance-focused class. However, the low sample size ($n = 48$) of this study left key analyses underpowered, so results are difficult to interpret.

No studies have examined the independent influence of fitness instructor commentary on student body image. However, studies on the influence of appearance-related comments in other settings suggest that motivational statements focusing on appearance may increase fitness students' levels of self-objectification and body shame. For example, one study demonstrated that an appearance-related compliment by a female research assistant resulted in increased body shame for women who were already high in self-objectification (Tiggemann & Boundy, 2008). Likewise, studies on "fat talk" have found that hearing other women make negative comments about their own bodies increases listeners' body dissatisfaction (Corning, Bucchianeri, & Pick, 2014; Jones, Crowther, & Ciesla, 2014; Salk & Engeln-Maddox, 2012).

The language used by a fitness instructor has the potential to be powerful. It can direct fitness students' attention to their appearance or to their health and functionality. It can emphasize different types of motivations for exercising (e.g., losing weight vs. improving endurance). The language used by instructors can also reinforce a wide variety of different goals that may or may not be endorsed by

participants (e.g., managing stress vs. getting a certain "look"). Instructors who use body shaming language may risk decreasing their students' commitment to exercise. In sum, there is a clear need for a systematic examination of how instructor language affects group fitness participants.

Overview of the Current Study

In the current study, we randomly assigned 203 college women to participate in one of two versions of a brief (16-minute) group fitness class: one version featured motivational comments focused on appearance, and the other featured comments focused on increasing health and strength. State-level body satisfaction and mood were assessed via pre- and post-tests. Experiences of self-objectification during the class were assessed at post-test. We predicted that, relative to the appearance-focused condition, those in the function-focused condition would report greater increases in body satisfaction and positive affect from pre- to post-test and greater reductions in negative affect from pre-test to post-test. We also predicted that women in the appearance-focused condition would report engaging in more self-objectification during the class and describe how they felt during the class in more negative terms.

This study was approved by the Northwestern University Institutional Review Board. An a priori power analysis using G*Power indicated a minimum sample size needed for a moderate effect size, power level of .80, and alpha of .05 to be 156. Thus, we set 156 participants as a minimum goal, but sought to recruit as many participants as possible during the time period in which the study was running.

Method

Participants

Participants were 203 undergraduate women ($M_{age} = 19.43$, $SD = 1.65$) recruited from an introductory psychology course. They received course credit in exchange for their participation. During a group testing session for the course, potential participants were asked to indicate whether they generally exercised at least once per week and whether they would be interested in participating in a study that would require them to go to the school's gym to take a work-out class. Only women who responded yes to both questions were recruited into the study, which was described as concerning "the effects of exercise on emotions." Participant BMIs ranged from 15.87 to 36.18 ($M = 22.43$, $SD = 3.31$).

Procedure

The experiment took place at a university fitness center and was completed in participant groups ranging in size from three to ten women. If too few women signed up for a given session, it was rescheduled. If too few arrived at a session, it was cancelled and the participants were given credit. When participants arrived, they were escorted to a quiet conference room where they completed the pre-test measures described below. All measures were counterbalanced. Next, they were escorted to a group exercise studio and introduced to the fitness instructor. The

studio was traditional, with wood floors and mirrors along one wall (which the women faced while exercising). The fitness class (which included basic strength-building movements easily modified for different fitness levels) lasted approximately 16 minutes and was taught by the third author, a certified fitness instructor and personal trainer. The instructor/third author was not present during data collection. The fitness instructor wore similar clothing and played the same music for each session; the exercises were identical for each class.

Participants were randomly assigned to either the function-focused condition or the appearance-focused condition. (Due to scheduling issues and occasional cancellations, slightly more participants were assigned to the appearance-focused condition.) Order of conditions was counterbalanced.

For each condition, the exercises and basic cues provided by the instructor were the same; all that varied were the motivational comments. In the function-focused condition, the instructor made motivational comments emphasizing health and strength (e.g., "This class is intended to help you strengthen your core muscles which are essential for initiating movement, enabling your body to do all the amazing things you enjoy."). In the appearance-focused condition, the instructor's motivational comments targeted weight loss, appearance, and re-shaping the body (e.g., "This class is intended to work your butts, guts, and thighs to get rid of those tricky problem spots, burn fat, and get you ready for the summer."). No comments targeted any class member individually. Instead, all were general, encouraging comments of the type typically made in group fitness classes. None of the comments related to *how* a certain exercise should be performed (these types of instruction were neutral and the same in both conditions). See Appendix for the full script for each condition. All sessions were audio-recorded and checked for fidelity to the script.

At the conclusion of the class, participants returned to the conference room to complete post-test measures. Prior to leaving, participants provided their height to the experimenter and were asked if they were willing to be weighed. Eight participants declined to be weighed. If they agreed, they were taken to a private area of the conference room to be weighed by a female research assistant with a standard bathroom scale. Participants stepped on the scale backward so that only the experimenter could see their weight. Height and weight were used to calculate BMI. After being weighed, participants were given a document with additional information about the study, debriefed by a member of the research team, and given time to ask any questions they had. The fitness instructor was also available to talk about the study and assure them that the function-focused class was her typical approach.

Pre- and Post-test Measures

State-level body satisfaction. We used the Body Image States Scale (BISS; Cash, Fleming, Alindogan, Steadman, & Whitehead, 2002) to assess state-level body satisfaction. The BISS comprises six items addressing how the respondent feels in the current moment about her body shape, weight, and physical attractiveness. For example, participants are given the stem "Right now I feel. . ." followed by responses ranging from *extremely satisfied with my body size and shape* to *extremely dissatisfied with my body size and shape*. In samples of undergraduate women, Cronbach's alphas of .77 (Cash et al., 2002) and .85

(Van den berg & Thompson, 2007) have been reported. In the current sample, Cronbach's alpha was .78 at the pre-test and .87 at the post-test.

Positive and negative affect. Positive and negative affect were measured using the 20-item version of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The scale includes words that describe emotions such as *Inspired*, *Guilty*, and *Proud* and was administered with the state-based instructions: *Indicate to what extent you feel this way right now (that is, at the present moment)*. The response scale ranged from 1 – *very slightly or not at all* to 5 – *extremely*. The original authors reported Cronbach's alphas of .88 for positive affect and .85 for negative affect in a sample of undergraduate students (Watson & Clark, 1994). In the current study, alphas for negative affect were .70 at the pre-test and .74 at the post-test. Positive affect alphas were .87 at the pre-test and .92 at the post-test.

Post-test Only Measures

In-class body surveillance. In addition to completing the measures listed above a second time, participants completed a modified version of the body surveillance subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996). This scale assesses "the amount of time a woman spends watching her body as an outside observer" (p. 209) and is frequently conceptualized as a measure of self-objectification (e.g., Mercurio & Landry, 2008; Moradi, Dirks, & Matteson, 2005; Tylka & Hill, 2004). The 7-point response scale for the eight body surveillance items (e.g., "I think more about how my body feels than how my body looks") ranges from *strongly disagree* and *strongly agree*. For the current study, we modified each item so that it began with "During the class" and switched the tense of the original items to past tense. For example, the sample item above was modified to read, "During the class, I thought more about how my body felt than how my body looked." For the original version of the scale, alphas have been reported as ranging from .85 to .89 in a sample of college women (Rolnik, Engeln-Maddox, & Miller, 2010). In the current study, alpha for this modified version was .84. Items were scored such that higher numbers indicated greater body surveillance during the class.

Additional measures. Participants provided open-ended data in response to the question, "What three words best describe how you felt when you finished this class?" Finally, a single item was included as a manipulation check: "Think about the things the instructor said during the class and choose the number on the scale below that best describes what she said." The response scale ranged from 1 – *Instructor's comments were focused on changing how the body looks/becoming more attractive* to 7 – *Instructor's comments were focused on health and strength of the body*. The mid-point of the scale was labeled *Instructor's comments equally focused on appearance and health/strength*.

Results

Participant BMI did not significantly vary by condition, $t\ (193) = 0.10$, $p = .93$, $d = .01$, 95% CI [–0.89, 0.99]. Analysis of the manipulation check item indicated that those in the function-focused condition viewed the instructor as significantly

more focused on health and strength ($M = 2.00$, $SD = 1.36$) than those in the appearance-focused condition, $M = 6.67$, $SD = 0.64$, $t\,(194) = -30.43$, $p < .001$, $d = 4.37$, 95% CI [–4.98, –4.37]. The manipulation check item was the only item on the last page of the post-test. Unfortunately, seven participants missed this page. Given the overall strength of the manipulation check results, we retained these participants for all analyses below.

See Table 1 for descriptive statistics for all dependent variables. Repeated measures ANOVAs with pre/post as the within-subjects factor and condition as the between-subjects factor were conducted for body satisfaction, positive affect, and negative affect. Overall, body satisfaction scores increased from pre-test to post-test, $F\,(1, 201) = 15.38$, $p < .001$, $\eta_p^2 = .07$. There was a significant time by condition interaction, such that the function-focused condition led to a significantly greater increase in body satisfaction compared to the appearance-focused condition, $F\,(1, 201) = 4.95$, $p = .027$, $\eta_p^2 = .24$.

Positive affect scores followed the same pattern, with scores increasing from pre-test to post-test, $F\,(1, 201) = 38.40$, $p < .001$, $\eta_p^2 = .16$. However, the interaction between time and condition indicated greater increases in positive affect for those in the function-focused condition, $F\,(1, 201) = 6.78$, $p = .01$, $\eta_p^2 = .03$. In other words, though the class improved positive affect and body satisfaction regardless of condition, the function-focused class led to greater improvements. Negative affect scores significantly decreased from pre-test to post-test, $F\,(1, 201) = 22.72$, $p < .001$, $\eta_p^2 = .10$. However, this decrease did not significantly vary by condition, $F\,(1, 201) = 0.22$, $p = .64$, $\eta_p^2 = .001$.

Consistent with predictions, scores on the modified version of the body surveillance measure were significantly higher in the appearance-focused condition than the function-focused condition, $t\,(201) = 4.80$, $p < .001$, $d = 0.68$, 95% CI [0.46, 1.10].

As a reminder, participants were asked to list the three words that best described how they felt after completing the exercise class. Two research assistants (blind to condition) independently determined the number of negative words (e.g., ashamed, unfit, discouraged) and number of positive words (e.g., accomplished,

Table 1 Descriptive Statistics by Condition

	Appearance-Focused Condition (n = 107)		Function-Focused Condition (n = 96)	
	Pre-test Score	Post-test Score	Pre-test Score	Post-test Score
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*
State Body Satisfaction	5.04 (1.31)	5.15 (1.47)	5.27 (1.15)	5.67 (1.44)
Positive Affect	2.47 (0.74)	2.65 (0.87)	2.47 (0.64)	2.94 (0.80)
Negative Affect	1.44 (0.38)	1.33 (0.35)	1.32 (0.30)	1.19 (0.30)
In-Class Body Surveillance	n/a	4.21 (1.11)	n/a	3.42 (1.22)
Number of negative descriptors of class	n/a	0.79 (1.04)	n/a	0.30 (0.66)
Number of positive descriptors of class	n/a	1.70 (1.08)	n/a	2.27 (0.88)

strong, excited) participants generated. Words could also be coded into a neutral/unclear category (e.g., okay, tight). "Strong/stronger," "happy," and "motivated" were the most commonly listed positive terms. "Annoyed," "ashamed/guilty," and "out-of-shape/not fit" were the most common negative terms. Inter-rater reliability was high (ICC = .98 for both number of negative and number of positive words). The few disagreements between coders were resolved via discussion with a third researcher. An independent-samples t-test revealed that participants in the function-focused condition listed significantly more positive words than those in the appearance-focused condition, $t\,(201) = -4.08$, $p < .001$, $d = 0.58$, 95% CI [–0.84, –0.29]. Likewise, those in the appearance-focused condition listed significantly more negative words than those in the function-focused condition, $t\,(201) = 3.91$, $p < .001$, $d = 0.55$, 95% CI [0.23, 0.73].

Discussion

This study is the first to isolate the impact of the type of motivational comments a fitness instructor makes in a group exercise class. In one version of the class (the appearance-focused condition), the instructor made comments consistent with an emphasis on "bikini bodies," weight loss, and body shaping. These are the same types of comments frequently seen in fitness marketing materials and on the covers of magazines like *Women's Health* (e.g., Bazzini & Cochran, 2015). In the other version of the class (the function-focused condition), she emphasized the potential for exercise to build health and strength, with no mention of weight loss or the body's appearance. In both classes, the exercises themselves were exactly the same. Results were consistent with meta-analytic findings showing that acute aerobic exercise leads to improvements in positive affect (Reed & Ones, 2006), as well as studies showing the potential for acute exercise to decrease negative affective states (Bartholomew, Morrison, & Ciccolo, 2005; Petruzzello, Landers, Hatfield, Kubitz, & Salazar, 1991). Additionally, the change in women's body satisfaction from pre-class to post-class scores showed the positive impact of completing a 16-minute aerobics class. This small to moderate effect is consistent with Hausenblas and Fallon's (2006) meta-analytic examination of experimental studies with intervention and control groups.

More importantly, the current study demonstrates that the positive psychological effects of acute exercise are made larger when an instructor uses motivational comments based on health and strength (instead of appearance or weight). When our fitness instructor focused on body functionality instead of appearance, positive affect and body satisfaction showed larger increases from pre-test to post-test. Though appearance-focused motivational comments did not influence negative affect, these comments did lead to substantially more self-objectification during the exercise class. On top of these findings, open-ended data suggested that women felt better about themselves after the function-focused class compared to the appearance-focused class. For example, they were more likely to describe themselves as feeling strong after the function-focused class, but ashamed after the appearance-focused class.

Several lines of research have linked appearance-focused commentary with self-objectification in women (e.g., Calogero, Herbozo, & Thompson, 2009;

Corning et al., 2014; Tiggemann & Boundy, 2008). Given the many negative psychological correlates of self-objectification (see Moradi & Huang, 2008, for a review) and the evidence that self-objectification interferes with exercise quality (Greenleaf, 2005; Melbye et al., 2007), there is no shortage of reasons for fitness instructors to avoid appearance-based commentary when teaching fitness classes. These findings are even more persuasive when combined with evidence that exercising for appearance-focused reasons (vs. health-focused reasons) is associated with body image disturbance (e.g., DiBartolo et al., 2007; Prichard & Tiggemann, 2008; Strelan et al., 2003; Tiggemann & Williamson, 2000; Tylka & Homan, 2015; Vinkers et al., 2012).

Certainly, some women do arrive at group fitness classes with a goal of changing how their body looks, and many may have weight loss as an implicit or explicit goal. However, there is no need for instructors to *reinforce* this approach to exercise, especially given evidence that body shame actually has a negative impact on weight management and exercise adherence (see Puhl & Heuer, 2010, for a review) and that body weight can be a poor indicator of cardiovascular or metabolic health (e.g., Wildman et al., 2008). Focusing on increasing health and strength indicators (rather than on weight loss or body shaping) is likely to be a more effective motivator during class, and avoids adding to the weight-related stigma so many women already face. Choosing to focus on improvements in overall well-being, rather than changing how one's body looks, is also consistent with recent recommendations for physicians treating patients who are overweight (Tylka et al., 2014). Results of the current study strengthen these empirical arguments for eliminating appearance-related comments at the gym.

Limitations and Recommendations for Future Research

Because this study was limited to a sample of undergraduate women at a Midwestern university, it is unclear how well these results might generalize to other populations. College-aged women show elevated risk for developing body dissatisfaction (Taylor et al., 2006) as well as eating disordered behaviors (Eisenberg, Nicklett, Roeder, & Kirz, 2011), and thus are a frequent population of interest for body image researchers. However, body dissatisfaction in women is relatively stable across the lifespan (Tiggemann, 2004) and recent research (e.g., Micali et al., 2017) suggests that active eating disorders among midlife women are more common than many may realize. Midlife women are also more likely to be actively trying to lose weight than young women (Slof-Op't Landt et al., 2017). Thus, there is no reason to limit tests of these functionality-focused fitness interventions to young women. Given some research suggesting that women show a greater appreciation for body functionality as they age (Tiggemann & Lynch, 2001), fitness approaches that emphasize functional benefits may be especially desirable for this demographic.

Likewise, although women generally show higher rates of body dissatisfaction and self-objectification compared to men (e.g., Frederick, Forbes, Grigorian, & Jarcho, 2007; Karazsia, Murnen, & Tylka, 2017; McKinley, 2006a), many men also face body image struggles (Ricciardelli, McCabe, Williams, & Thompson, 2007). Given that men's body dissatisfaction often centers on muscularity rather than thinness concerns (McCreary, 2007), it is possible that some of the function-focused

language used in this study – particularly the language focused on getting stronger – could reinforce some men's concerns about *appearing* muscular rather than improving body function through strength. Those who wish to emphasize functionality for men in fitness settings should take care to use language that focuses on what strength lets one do (e.g., lift things without injury) instead of how strength might look to others (e.g., large biceps).

Future researchers could easily modify the script used for this study to fit with a variety of exercise routines and populations in order to test whether the positive findings in the current study might be applied beyond this specific population and this specific type of fitness class. In addition to research attempting to extend these findings to older samples and samples that include men, examining the language used in physical education classes for children and adolescents would also be valuable.

Because this experiment tested only a one-time, relatively short fitness class, it is difficult to determine how long effects might last or how the positive effects of functionality-focused language might change given repeated exposures over time (for example, when taking a weekly class). Future longitudinal research could help to answer this question. More naturalistic research in which fitness instructor language is recorded and then later coded for appearance-focused content would also be valuable.

Conclusions

In most fitness classes, a number of cues orienting women toward the appearance of their bodies are already present (e.g., mirrors and the presence of other women in revealing clothing). Instead of adding to a potentially objectifying environment, fitness instructors have an opportunity to do the opposite: to remind their students that exercise is not about shame or the need to emulate a specific body ideal, but rather about feeling better and improving one's ability to achieve the things one wants to in their life. Even if a fitness instructor is teaching a class with an appearance-focused name (e.g., one focused on "blasting fat"), he or she still has the opportunity to frame the class in general (and specific exercises) in terms of what they do for the body's functionality. Instead of focusing on calorie burn, for example, instructors could focus on how aerobic exercise is linked with cardiovascular health.

An approach to fitness that focuses on function and health could be adopted broadly in the fitness industry – not simply in group fitness classes. For example, marketing materials for fitness centers could work to avoid objectifying imagery and promises of achieving one's dream "look." Instead, marketing could focus on what exercise can allow people to *do* more effectively and how exercise can help with stress management or increase energy. Personal trainers can also take these lessons to heart. Beginning with the initial meeting with a client, assessment and goal setting can focus on function instead of appearance.

Although many fitness professionals may only make occasional appearance-related commentary in fitness classes, it is important not to underestimate how these comments about "bikini bodies" and "ditching love handles," even when rare, can negatively impact the women who hear them. There is no compelling

reason to make these types of comments, especially given that health and strength-focused comments hold the potential to improve women's body esteem (e.g., Alleva, Martijn, Van Breukelen, Jansen, & Karos, 2015; Alleva, Veldhuis, & Martijn, 2016). Fitness instructors, and those who train and accredit instructors, have the opportunity to take the lead in moving the focus from women's looks to their health and well-being. By simply changing the language used to motivate fitness students, instructors can promote a healthier approach to exercise.

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Appendix: Instructor Scripts for Each Condition

Function-Focused	Appearance-Focused
Hey y'all, I'm Colleen. Welcome to Core Conditioning! *This class is intended to help you strengthen your core muscles, which are essential for initiating movement, enabling your body to do all the amazing things you enjoy*. Thank you so much for being a part of our study.	Hey y'all, I'm Colleen. Welcome to Core Conditioning! *This class is intended to work your butts, guts and thighs to get rid of those tricky problem spots, burn fat, and get you ready for the summer*. Thank you so much for being a part of our study.
I have one rule, *honor* your body, *push yourself for whatever goal you have – whether it be getting stronger, relieving stress, running your fastest mile*, but also modify as you need – respect your body. I'll provide lots of modifications along the way.	I have one rule, *listen to* your body, *push yourself for whatever goal you have – maybe losing those last few pounds, getting that bikini body ready. . . whatever!* but also modify as you need – respect your body. I'll provide lots of modifications along the way.
As always, please be sure that you demonstrate proper form throughout the class. I will be sure to cue each movement, but feel free to let me know if you are uncomfortable with any of the movements throughout the class.	As always, please be sure that you demonstrate proper form throughout the class. I will be sure to cue each movement, but feel free to let me know if you are uncomfortable with any of the movements throughout the class.
Alrighty, let's take it to a squat. For this movement, keep your knees aligned with your ankles, and behind your toes. Weight's in the heels - You should be able to wiggle your toes the entire time. Push your glutes back. Alright let's start down two and up two.	Alrighty, let's take it to a squat. For this movement, keep your knees aligned with your ankles, and behind your toes. Weight's in the heels - You should be able to wiggle your toes the entire time. Push your glutes back. Alright let's start down two and up two.
This exercise is crucial to developing strength in the legs, these are the muscles that truly help you run, jump, sprint like a super hero.	*This exercise blasts fat in the legs, no more thunder thighs for us! Get rid of that cellulite.*
16 singles, let's go! Hold it down, *I know you can do this, you are so strong! Think of all the amazing things your body is capable of.*	16 singles! Let's go! Hold it down: *think about what your body can look like! Blast that leg fat. Earn your dream body.*
Most people don't immediately think of the chest as an important part of the core. But it is! *Pushups develop strength in your upper body and simultaneously challenge your stabilizers in your shoulders and abdominals – making you stronger and ready for anything.*	Most people don't immediately think of the chest as an important part of the core. But it is! *Pushups target your chest and those awkward bat wings poking out of your strapless dresses. They also incorporate your shoulders and abs to target fat all over.*

(continued)

Appendix *(continued)*

Function-Focused	Appearance-Focused
For this please pick your level. Level one is on your knees, please be sure that you are a slide rather than a table. Nice flat lines in the back, keeping the spine aligned and the glutes down. Option two is to keep it on your toes. For both, be sure to look 6 inches ahead of you and keep the core engaged *to maintain a nice straight line so you keep your body healthy and injury-free.*	For this please pick your level. Level one is on your knees, please be sure that you are a slide rather than a table. Nice flat lines in the back, keeping the spine aligned and the glutes down. Option two is to keep it on your toes. For both, be sure to look 6 inches ahead of you and keep the core engaged. *Don't let your back curve so that your belly hangs down!*
Lots of folks forget about the back when training the core. It's super important to train your back *to prevent injuries and build strength – almost every activity uses strong back muscles and strengthening them will help you keep good posture and health for your whole life, so that you can do whatever you need your body to do!* Please remember that if this movement is uncomfortable to you, that you can choose to do one leg and one arm at a time to reduce impact.	Lots of folks forget about the back when training the core. It's super important to train your back *to blast that muffin top. These simple exercises will help you tone up the lower back and incorporate a little bit of that trouble spot under your butt as well.* Please remember that if this movement is uncomfortable to you, that you can choose to do one leg and one arm at a time to reduce impact.
Alrighty let's move onto what most people think of as the core: your abdominal wall and obliques. *These muscles are crucial to everything that you do. They give you power! You're super strong, and you have a lot of awesome things to do so let's get to work!*	Alrighty let's move onto what most people think of as the core: your abdominal wall and obliques. *The movements we are doing today are designed to blast fat and help you get those elusive 6 pack abs. We'll be ready for bikinis in no-time!*
Please remember to keep your spine in alignment, keeping your chin separated from your chest as if you have a glass ornament that you don't want to crush. If any movement compromises your lower back, lift the lever higher to support the lower back. Please be sure to pull your lower back down to the floor and eliminate all space.	Please remember to keep your spine in alignment, keeping your chin separated from your chest as if you have a glass ornament that you don't want to crush. If any movement compromises your lower back, lift the lever higher to support the lower back. Please be sure to pull your lower back down to the floor and eliminate all space.
Take your legs to table top *for an extra challenge*! Extend your legs all the way to the ceiling and reach for the toes! Lower one leg down and keep crunching. It's hard, *but you're strong! I know you can do this!*	Take your legs to table top *to target your pooch*! Extend your legs all the way to the ceiling and reach for the toes! Lower one leg down and keep crunching. It's hard, *but think of the results! Fix your body right now.*
And lower your legs one at a time, push your hands under your glutes to help reinforce the lower back. Remember the higher your leg is, the easier the movement.	And lower your legs one at a time, push your hands under your glutes to help reinforce the lower back. Remember the higher your leg is, the easier the movement.

(continued)

Appendix *(continued)*

Function-Focused	Appearance-Focused
And my favorite movement: the bicycle crunch. *This move engages your whole core – think of all the amazing things your body can and will do!*	And my favorite movement: the bicycle crunch. *This movement is super efficient, burning fat throughout your entire core.*
30 second plank! If you need to take a break no worries, just come down to your knees. (Be sure you're leaning forward!) *This is an awesome movement for total core stability.*	30 second plank! If you need to take a break no worries, just come down to your knees. (Be sure you're leaning forward!) *This is a full body fat melter. Results happen here.*
And take it to the side. *You are so strong! You've got this!*	And take it to the side. *Let's get rid of those love handles! We hate love handles!*
Alrighty, get back in that seated position and lean back until you feel your core engage. Reach your arm back behind your ear and hold. *This is a powerful move for powerful women. Keep it up!*	Alrighty, get back in that seated position and lean back until you feel your core engage. Reach your arm back behind your ear and hold. *We're nearing the end here. Focus on that end goal. What do you want to change about your body?*
Final movement. Resume that same position, but instead of reaching up and back, twist the body. Try to touch the back of your mat. *Be the strongest, most bad ass you!*	Final movement. Resume that same position, but instead of reaching up and back, twist the body. Try to touch the back of your mat. *Last chance to burn that belly fat right here!*
Finally, *let's work to develop power in the lower core, the lower back, glutes, and hamstrings. Jump high, run fast, move boldly. You're on the last stretch here.*	Finally, *let's target that cottage cheese! [point at buttocks] This is such an annoying problem area, but I have a great exercise for you to tone it up!*
Pretend that the floor is on fire. Lift your hips as high as you can and squeeze the glutes at the top. As you come down, try not to touch the floor.	Pretend that the floor is on fire. Lift your hips as high as you can and squeeze the glutes at the top. As you come down, try not to touch the floor.
Alrighty! That's the end! You all have really worked hard today, and I hope that you feel like you've *accomplished something. Your body is capable of such amazing things, and you all should be really proud of what you did!*	Alrighty! That's the end! You all have really worked hard today, and I hope that you feel like you've *made progress to get your best body. Remember that to get rid of those pesky trouble spots you need to combine classes like these with cardio for full body toning.*
Please be sure to stretch out your muscles for 30–60 seconds when you get home – warm them up first!	Please be sure to stretch out your muscles for 30–60 seconds when you get home – warm them up first!

Note. Italics indicates language that differed by condition.