

Do Nonexercisers Also Share the Positive Exerciser Stereotype?: An Elicitation and Comparison of Beliefs About Exercisers

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The purpose of this research was to examine whether exercisers and nonexercisers are rated similarly on a variety of characteristics by a sample of randomly selected regular exercisers, nonexercisers who intend to exercise, and nonexercisers with no intention to exercise. Previous research by Martin Ginis et al. (2003) has demonstrated an exerciser stereotype that advantages exercisers. It is unknown, however, the extent to which an exerciser stereotype is shared by nonexercisers, particularly nonintenders. Following an item-generation procedure, a sample of 470 ($n = 218$ men; $n = 252$ women) people selected using random digit dialing responded to a questionnaire assessing the extent to which they agreed that exercisers and nonexercisers possessed 24 characteristics, such as “happy,” “fit,” “fat,” and “lazy.” The results strongly support a positive exerciser bias, with exercisers rated more favorably on 22 of the 24 items. The degree of bias was equivalent in all groups of respondents. Examination of the demographic characteristics revealed no differences among the three groups on age, work status, or child-care responsibilities, suggesting that there is a pervasive positive exerciser bias.

Keywords: beliefs, physical activity, activity levels

Physical inactivity and related morbidity (e.g., obesity) are among the biggest threats to health in North America. Updated estimates in 2002 revealed that 53.5% of Canadians were inactive and that 14.7% were obese (Katzmarzyk & Janssen, 2004), and only 32% of Americans meet current guidelines for healthful physical activity (Eakin, Glasgow, & Riley, 2000). There is very strong evidence that increasing one’s physical fitness both reduces obesity and reduces associated health risks, including abdominal fatness and metabolic syndrome (Janssen, Katzmarzyk, Ross, Leon, Skinner, et al., 2004; Katzmarzyk, Church, Janssen, Ross, &

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Blair, 2005; Slentz, Duscha, Johnson, Ketchum, Aiken, et al., 2004). However, interventions to increase physical activity achieve only modest success (Eakin et al.; Van Sluijus, Van Poppel, & Van Mechelen, 2004; King, Ahn, Rejeski, Marcus, Dunn, et al., 2006; King, Rejeski, & Buchner, 1998). Effective health promotion efforts may influence the proportion of people who at least develop an intention to become physically active. However, before intentions are changed, target audiences must be made aware of health promotion messages and deem that the messages are personally relevant (Bauman, Smith, Maibach, & Reger-Nash, 2006). In other words, it is possible that some people who are not meeting current activity guidelines simply do not think they should be active, and maybe do not see messages promoting increased physical activity as relevant to them.

These individuals could be described as “disinclined abstainers” (Orbell & Sheeran, 1998; Sheeran, Milne, Webb, & Gollwitzer, 2005). According to Orbell and Sheeran, disinclined abstainers are people who do not engage in the target behavior and have no intention to do so, and they display very strong behavior–intention congruence: they have no intention of acting, and they do not act. There is some limited evidence that inclined and disinclined abstainers are different from each other. Specifically, Orbell and Sheeran (1998) examined women’s intentions to get a cervical screening test and then whether they got the test within 12 months. This was how they derived the four categories: people who intend to act and do, people who intend to act and do not, people who do not intend to act and do, and people who do not intend to act and do not. Orbell and Sheeran, and later Sheeran (2002), found only a minority of people (7%) with negative intentions actually act, whereas 47% of people with positive intentions eventually act. Orbell and Sheeran identified motivational differences (using cervical screening) between all the groups, but the least reliable distinction was between inclined actors and inclined abstainers, suggesting that there is less difference between what we are calling exercisers and nonexercising intenders than there is between these two groups and nonexercising nonintenders. Yet, in exercise research we tend to group nonexercisers together, not knowing whether they intend to exercise or not. The extent to which disinclined abstainers are different from “inclined abstainers” (those who do not act, but intend to) on various factors might be important in the development of public health promotion campaigns to increase physical activity intentions and, subsequently, behavior. It might be necessary, for example, for public health messages to target each of these groups separately.

Little is known about what nonexercisers think about physical activity. However, it seems possible that nonexercising nonintenders (disinclined abstainers) might be an important target of health promotions because they are most likely to be at high risk (Elley, Kerse, & Aroll, 2003). Furthermore, they are also likely to be hardest to reach (Chinn, White, Howel, Harland, & Drinkwater, 2006; Meichenbaum & Turk, 1987). If nonexercisers’ thoughts about physical activity are not the same as those of exercisers or intenders (inclined abstainers), then the creation of interventions to promote physical activity among nonexercisers on the basis of what is known about exercisers might lack validity (Haynes, 2002). In terms of awareness of physical activity messages, there is some evidence that nonexerciser schematics display attentional bias (i.e., the automatic selective attention paid to material that matches an individual’s interest; MacLeod, Mathews, & Tata, 1986) for negatively valenced, sedentary-lifestyle words such as lazy and unmotivated

(Berry, 2006). (A nonexerciser or exerciser schematic is a form of self-schema that describes personal interests specifically about exercise. A nonexerciser schematic is a person who says that “exercise regularly,” “keep in shape,” and “physically active” are phrases that do not describe him or her, whereas an exerciser schematic would say that these phrases do describe him or her [see Berry, 2006]). That is, when a nonexerciser schema is active, people pay more attention to negative descriptors of nonexercisers. Conversely, exerciser schematics but not nonexerciser schematics displayed attentional bias for exercise-related words, such as *fit* and *energetic*. These results suggest that exercisers and nonexercisers pay attention to different aspects of exercise messages. Therefore, a greater understanding is needed of what might influence attention to health promotion materials by exercisers and nonexercisers. One possible explanation for the marked attentional bias nonexerciser schematics showed for words like *lazy* and *inactive* was due to activation of a stereotype. We intend to explore whether an exerciser stereotype is differentially supported by exercisers, nonexercising intenders, and nonexercising nonintenders.

Previous research has established that there is a positive overall stereotype of exercisers and a negative stereotype for nonexercisers (Martin Ginis & Leary, 2006). Specifically, Martin and Leary have discovered that, when given a list of possible descriptors of exercisers and nonexercisers (e.g., is mean or kind, has self-control or lacks self-control, is ugly or good looking, is scrawny or muscular), respondents rated exercisers more favorably than nonexercisers. Martin Ginis, Latimer, and Jung (2003) have also established that the positive exerciser stereotype influences people’s ratings of nonexercisers such that they are regarded overall less positively than exercisers as well as control targets for whom no activity level was mentioned, suggesting a negative nonexerciser stereotype. Those researchers have found this exerciser stereotype to apply regardless of the activity level of the target, ranging from “active living” to excessive exercise; irrespective of the level of their activity, active people are rated more favorably than inactive people. Research that further establishes exerciser and sedentary stereotypes could have strong implications for physical activity behavior because there is also evidence that priming stereotypes can impact perceptions of the self (Levy, 1996); thus, stereotypes associated with sedentary lifestyles may result in sedentary individuals’ actually believing they are lazy and unmotivated. This might be one reason exercise messages might not reach nonexercisers, especially nonintenders.

To extend this body of research, one approach is to have people rate both an exercising target and a nonexercising target. Presumably, if a positive exerciser stereotype exists, people would generally rate the exerciser more favorably than the nonexerciser on a variety of characteristics. However, if the person doing the ratings is a nonexerciser, and especially a nonintender, we might expect their use of self-image management in their ratings of others to influence the overall extent of the positive exerciser stereotype. As Martin Ginis and colleagues (2003) have pointed out, people are interested in positively evaluating groups to which they belong. It is possible that they can enhance the image of their own group in one of two ways—by down-playing any positive characteristics of other groups—or by favoring characteristics of their own groups. Similarly, they can emphasize negative characteristics of other groups or they can deemphasize negative characteristics

of the group to which they belong. This may reflect in-group bias as explained by system justification theory, which predicts that lower-status groups will have lower implicit liking for their in-group when compared with higher-status groups (Lane, Banaji, Nosek, & Greenwald, 2007). Therefore, it may be that nonexercisers who intend to take up exercise in the near future might endorse the positive exerciser stereotype because of their own exercise goals. That is, they will rate the desirable target in such a way as to maintain a positive self-image. Thus, differences in behavior might not be associated with differences in all belief systems associated with the behavior of interest. It is possible, for example, that nonexercisers think that exercise is basically a good thing, in some ways, even though they do not exercise. By exploring differences between behaviorally defined groups on relevant beliefs, it might be possible to identify health promotion materials that are more likely to reach more people, and specifically more sedentary people, than previously thought.

Whereas the research supporting the positive exerciser stereotype has been methodologically sound, the samples have been restricted to convenience samples of undergraduate students. And whereas all research participants must ultimately volunteer their participation, the use of convenience sampling methods can increase the probability that individuals interested in the research or in the topic of study will step up (volunteer bias, see Meichenbaum & Turk, 1987). Moreover, in the one study that did draw a distinction between exercisers and nonexercisers (Martin Ginis et al., 2003), there was no further comparison of nonexercising nonintenders and nonexercising intenders, which according to Orbell and Sheeran (1998) should be conceptually distinct groups.

One of the main challenges to physical activity researchers is getting sedentary individuals to participate in the research. The majority of research considering physical activity motivation has included exercisers or those considering beginning exercise because nonexercisers are generally unwilling to participate in research about exercise. Meichenbaum and Turk (1987) discuss this issue as the volunteer bias. Basically, individuals who choose to participate in research do so because they tend to be interested in the topic of study or in the research process per se, more so than their nonvolunteering counterparts. Thus, the achievement of research results generalizable beyond the characteristics of the respondents is extremely difficult, and the validity of such generalization must be questioned. One approach is to use random sampling procedures, which reduce but do not totally eliminate volunteer bias. The bias is reduced because the typical nonvolunteer is at least approached and invited to participate, increasing the likelihood that he or she might accept the invitation. It is not totally eliminated because, since we cannot conscript participants, even though they are invited, the disinterested person can still decline to participate.

Objective of the Study

The objective of the current study was to determine whether characteristics of exercisers and nonexercisers are equally endorsed by exercisers, nonexercising intenders, and nonexercising nonintenders. To achieve the objective, a two-stage process was undertaken. In Phase 1, a list of characteristics of exercisers and non-

exercisers was generated through an interview process with a convenience sample of exercisers and nonexercisers. In Phase 2, the list of characteristics was balanced to offer similar opportunities to rate both exercising and nonexercising targets on each of the characteristics. A large sample of randomly selected exercisers and nonexercisers rated an exercising target and a nonexercising target on all of the characteristics. Based on the limited available evidence regarding exerciser stereotypes, we hypothesize that the exercisers and the nonexercising intenders will endorse the positive exerciser stereotype more strongly than will the nonexercising nonintenders.

Methods

All parts of this study received approval from a university research ethics board. All participants provided oral (over the phone) informed consent.

Phase 1

Item Generation. To adhere to the social cognitive tradition, it is recommended that relevant beliefs be elicited from the population under study (Ajzen, 2006). In the majority of previous research concerning exercise motivation, the personality and personal characteristics of the exercisers/nonexercisers have been selected by the researchers according to theory and their own experiences, or were generated by exercisers only, but it is not known whether these are the same characteristics that “average people” would attribute to exercisers and nonexercisers (Rutter & Bunce, 1989). Therefore, using a qualitative interview procedure, we sought to generate a list of characteristics of exercisers and nonexercisers from a relevant sample in the form of words or descriptors.

As part of a larger study, a purposive sample of individuals was selected based on their current activity involvement, gender, and age. Participants were solicited from the population of two large Canadian universities by two researchers to reduce the influence of a regional or researcher bias. Potential participants were provided a definition of exercise based on *Canada’s Physical Activity Guide to Healthy Active Living*. They were asked to indicate whether, compared with the guidelines, they were current exercisers, and, if not, they were asked whether they intended to take up regular exercise within the next six months. Based on their responses, they were classified as current exerciser, or nonexerciser intending to exercise in the future, or nonexerciser not intending to exercise in the future. This yielded a group of 18 nonexercising nonintenders, 20 nonexercising intenders, and 18 regular exercisers. There were 26 men and 40 women aged 34.67 (12.24). The sample included 23 students, 40 people who were employed full time, and 7 who were employed part time, or not working at the time of the data collection.

A brief, structured interview was then conducted with each participant. In addition to providing some basic demographic information, and some additional exercise-related questions, these individuals provided descriptions of persons who exercise and persons who do not exercise. Specifically, the participants responded to two open-ended questions asking, “when you think of ‘exercisers’ what comes to mind?” and “when you think of ‘non-exercisers’ what comes to mind?”

A list of characteristics was compiled from the interview data and made into a questionnaire to be used in Phase 2. All of the unique responses were used to prevent bias created by only using modal responses (Rutter & Bunce, 1989). That is, each response such as “exercisers are healthy” and “non-exercisers are lazy” was used as the foundation for a quantitative item. To balance the list of options available to respondents, and to determine whether the exerciser stereotype is a global positive perception of exercisers or a global negative perception of nonexercisers, all of the responses provided were articulated as characteristics of both an exercising target and a nonexercising target. For example, if a participant suggested that “exercisers are concerned about their appearance,” this characteristic was developed into an item referring to “exercisers” (similar to the original statement) and for “non-exercisers.” In addition, the negative form of the item was constructed for both groups. So, two additional items were added: “exercisers/non-exercisers are *not* concerned about their appearance.” This process yielded a list of 24 nonredundant characteristics that were repeated for each of the exercisers and nonexercisers for a total of 48 items that were used as the basis for Phase 2. A 9-point Likert-type rating scale anchored with 1 = *strongly disagree* and 9 = *strongly agree* was added to each item to complete the 48 item instrument that would be used in Phase 2.

Phase 2

In the second phase of the study, a random sample, stratified on exercise participation and intention levels, as well as gender, was drawn using a random digit dialing method. Respondents were categorized as *regular exercisers* (RE) if they reported having participated in exercise at least three times per week and reported intending to maintain this level of activity. Respondents were categorized as *non-exercisers* if they reported exercising once a week or less. Nonexercising respondents who reported intending to increase their level of activity were additionally characterized as *intenders* (NE-I), whereas those who reported intending to maintain or even intending to decrease their level of activity were categorized as *non-intenders* (NE-N). Respondents who exercised twice weekly, and those who exercised three times per week but reported not intending to maintain their activity over the next month were excluded from the study. All respondents had to be between the ages of 25 and 65 years. Whereas all participants responded to the questions about their current exercise status, they did not know that exercise status was an inclusion criterion for the study or that the responses would be compared among exercise status groups.

Participants

A final sample of 470 respondents was recruited. Of 1536 eligible persons contacted, 948 refused to participate, 7 provided incomplete interviews, and 111 had language problems. The response rate was higher for the exercising group than the nonexercising groups, and the quotas were met quickly for this respondent group. The overall average age of the respondents was 43.7 (11.61) years.

As part of the demographic information, participants responded to the Godin Leisure Time Questionnaire. This questionnaire yields a METs score by adding

weighted frequencies of 15-min bouts of mild, moderate, and strenuous activity (Godin & Shephard, 1985). Two-way ANOVA examined total reported exercise (METs) among the groups with two between-groups factors, exercise level (three groups: RE, NE-I, and NE-N), and sex (two groups: male and female) and revealed a significant main effect for exercise level, $F(2, 464) = 175.18, p < .0001, \eta^2 = .430$, and no other significant effects. Post hoc Student–Newman–Keuls test revealed that the total METs of the exercisers was significantly different from the NE-N and the NE-I, who were not different from each other. One-way ANOVA examined behavioral intention (frequency of intended moderate exercise sessions in the next week) among the groups with two between-groups factors, exercise level (three groups: RE, NE-I, and NE-N), and sex (two groups: male and female) and revealed a significant main effect for exercise level, $F(2, 467) = 92.38, p < .0001, \eta^2 = .28$ and no other significant effects. Student–Newman–Keuls post hoc test revealed that all three groups were significantly different from each other, $p < .01$. Thus, the three groups were found to be different from each other in terms of self-reported exercise levels and exercise intentions, supporting their continued comparison based on the distinctions in behavior and intentions. Means and standard deviations for exercise and intentions are presented in Table 1.

Participants responded yes or no to whether they had children under 16 years living in their homes, whether they were the primary childcare provider, and whether they had assistance with childcare. They also indicated whether they were students, full-time homemakers, employed, or unemployed, and they responded to a follow-up question on whether they were employed full time or part time. Possible differences between the exercise groups on these variables might reveal an explanation for less exercise behavior. For example, if nonexercising nonintenders reported more responsibility for childcare with more full-time employment, then it would be “factual” that nonexercisers are “busier” than exercisers, thus explaining why they do not have time for exercise. If, however, all groups are equal on these characteristics, then these life characteristics cannot be underpinning any bias observed. Chi-square revealed some expected differences between genders such that women had a higher frequency of being the primary childcare provider and a higher frequency of men reported being employed and employed full time. Importantly, there were no distributional differences in the frequency of responses to any of these questions among the three exercise levels. That is, RE, NE-I, and NE-N reported similar frequencies of having children in the home, providing childcare, having assistance with childcare, and being employed. Cell counts are provided in Table 1.

Measures and Procedures

Because the purpose of this study was to determine whether exercisers and nonexercisers hold a similar stereotype of exercisers, it was decided to block the items with respect to nonexercisers and exercisers. This procedure would result in the creation of a response set such that respondents would be more aware that they were constructing a positive or negative evaluation of the target, and would be aware if they were contrasting that evaluation when they moved on to the next target, and they were aware that they would be rating characteristics of both exercisers and nonexercisers. That is, if respondents were aware that they would be

Table 1 Participant Characteristics

Item	RE		NE-I		NE-N		Total
	Men	Women	Men	Women	Men	Women	
<i>n</i>	101	101	59	79	58	72	470
Age mean (<i>SD</i>)	41 (12)	46 (14)	44 (13)	45 (14)	47 (13)	48 (17)	45 (14)
Current behavior, in METs, mean (<i>SD</i>)	37.5 (27.12)	37.21 (35.53)	0.66 (1.25)	1.17 (2.32)	1.12 (2.38)	0.81 (1.44)	N/A
Behavioral intentions (moderate sessions), mean (<i>SD</i>)	10.5 (9.78)	11.29 (8.67)	5.53 (7.55)	6.25 (6.01)	0.17 (0.77)	0.07 (0.48)	N/A
Have children under 16? (yes)	33	26	19	24	20	29	
Primary childcare provider? (yes)	25	23	14	24	14	29	
Have assistance with childcare? (yes)	21	18	13	17	13	15	
Occupation							
Student	3	7	0	6	3	3	
Homemaker	1	24	1	11	0	20	
Employed	79	57	47	51	46	40	
Employed full time	77	37	44	41	42	31	
Employed part time	2	19	3	10	4	9	
Not employed	18	13	11	10	9	9	

Note. RE = regular exercisers, NE-I = nonexercising intenders, and NE-N = nonexercising nonintenders.

rating the characteristics of exercisers and nonexercisers respectively, they would have the opportunity to manipulate their responses to support their self-image.

Following the determination of the participants' own exercise status, they were given the following statement about the purpose of the study: "One of the purposes of this research is to come up with good descriptions of what people think exercisers and non-exercisers are like in general. In another study, we asked people to describe non-exercisers and exercisers. We want to ask you about some of the things the other people said." Participants were then instructed to think of people "who do not exercise regularly." Then they were asked to indicate the extent to which they agreed with each statement on a 9-point Likert scale where 1 = *strongly disagree* and 9 = *strongly agree*. Next the list of items was read following the stem "Non-exercisers are. . ." They were then asked to think about people who "exercise regularly" and were asked the extent to which they agreed with each statement following the stem "Exercisers are. . ."

Results

A 2 (target: nonexerciser or exerciser) (repeated measures factor) \times 3 (exercise level of respondent: RE, NE-I, or NE-N) (between subjects factor) \times 2 (gender of respondent: male or female) (between subjects factor) MANOVA including all 24 items was conducted to determine whether there were any multivariate effects. A multivariate main effect for target was revealed, $F(1, 464) = 67.87, p < .0001, \eta^2 = 0.13$. There were no other significant effects. Of most importance, there was no main effect of level of exercise of respondent, $F(2, 464) = 0.02, p = .98, \eta^2 = 0$, or gender, $F(1, 464) = .018, p = .92, \eta^2 = 0.00$. There was no target \times exercise level interaction, $F(2, 464) = .09, p = .92, \eta^2 = 0.00$; no target \times gender of respondent interaction $F(1, 464) = .05, p = .82, \eta^2 = 0.00$; and no target \times gender of respondent \times exercise level of respondent interaction, $F(2, 464) = 1.56, p = .21, \eta^2 = 0.01$. Because the only significant effect was for target, 24 follow-up ANOVAs were conducted to further explicate this effect. Each analysis treated the rating items as repeated measures (a within-subjects factor). Bonferroni adjustments applied yielded critical p values of .002. Descriptive statistics for the items are presented in Table 2. Overall, the exercising target was rated significantly more favorably compared with the nonexercising target on 22 of the 24 items. The results of the main effects for target are presented in Table 2. The average effect size across the 22 items was $\eta^2 = .25$ ($SD = .16$).

Summary of Results

Exercisers and nonexercising intenders and nonintenders did not differ from each other in terms of children under age 16 in the home, responsibility for childcare, occupation, or employment status. Nonexercisers were rated, overall, by both exercising and nonexercising respondents as less healthy, less energetic, slightly more fat, unfit, less motivated, less concerned about their health, less strong, less busy, less committed, less happy, less healthy, less concerned about their appearance, weaker, and less disciplined than exercisers. This seems particularly striking given that all respondents were explicitly told that we were interested in what people thought about exercisers and nonexercisers, and were asked whether they

Table 2 Descriptive Statistics of Degree of Agreement With Characteristic Beliefs by Target

Item	Target		Main effect		
	Nonexerciser Mean (SD)	Exerciser Mean (SD)	F(1, 469)	p	Partial η^2
1. Unhealthy	5.66 (2.60)	2.69 (1.91)	363.61	<.0001	.44
2. Energetic	4.09 (2.39)	7.12 (1.81)	479.88	<.0001	.51
3. Not fat	4.22 (2.15)	5.14 (1.99)	44.46	<.0001	.09
4. Unfit	5.53 (2.43)	3.36 (2.06)	195.35	<.0001	.29
5. Unhappy	4.10 (2.18)	3.84 (1.89)	3.88	<.05	.08
6. Motivated	4.51 (2.17)	6.87 (1.85)	311.02	<.0001	.40
7. Not concerned about health	4.21 (2.49)	2.79 (2.16)	93.73	<.0001	.17
8. Strong	4.30 (2.09)	6.22 (1.85)	210.43	<.0001	.31
9. Busy	5.43 (2.41)	6.20 (1.90)	30.23	<.0001	.06
10. Not committed	4.50 (2.46)	3.01 (1.93)	105.15	<.0001	.18
11. Happy	5.26 (1.96)	5.89 (1.98)	26.18	<.0001	.05
12. Lazy	4.14 (2.39)	2.61 (1.73)	119.99	<.0001	.20
13. Healthy	4.29 (1.99)	6.70 (1.82)	323.89	<.0001	.41
14. Concerned about appearance	5.34 (2.72)	7.02 (1.81)	201.93	<.0001	.30
15. Not busy	3.84 (2.13)	3.36 (1.93)	15.24	<.0001	.03
16. Weak	4.20 (2.19)	2.96 (1.75)	89.59	<.0001	.16
17. Concerned about health	5.47 (2.13)	7.56 (1.53)	328.39	<.0001	.41
18. Fat	4.19 (2.13)	3.95 (1.80)	3.49	<.06	.01
19. Disciplined	4.34 (2.08)	6.78 (1.91)	351.75	<.0001	.42
20. Committed	4.65 (2.14)	6.93 (1.77)	332.30	<.0001	.42
21. Not concerned about appearance	3.94 (2.09)	3.05 (1.86)	55.46	<.0001	.11
22. Undisciplined	4.22 (2.13)	2.75 (1.59)	147.86	<.0001	.24
23. Fit	3.98 (1.90)	6.58 (1.84)	414.05	<.0001	.47
24. Unmotivated	4.42 (2.12)	2.89 (1.76)	143.49	<.0001	.23

agreed or disagreed with the things other people had previously told us. If the exerciser stereotype was not held by nonexercisers, we would have seen between-groups differences in the ratings of exercisers (with the nonexercising respondents showing lower endorsement of the positive characteristics of the exercise target) or of the nonexercisers (with the nonexercising respondents showing more favorable ratings of the nonexercising target than the exercisers), but no between-groups differences were observed, suggesting that the exerciser stereotype is generalizable.

Discussion

The present results suggest a robust positive exerciser stereotype that is endorsed by exercisers and nonexercisers who both intend and do not intend to change their exercise behavior. Furthermore, the lack of difference in this sample cannot be attributed to characteristics of each of the three groups such as age, children at home, or employment status, which could be construed as barriers to exercise, because there were no distributional differences among our three behaviorally determined groups on any of these factors. This was not completely consistent with the hypothesis that the nonexercising nonintenders would not support the stereotype as strongly as the other groups. Thus, the effect appears to be stronger than we expected and has been reported in previous research (Martin Ginis et al., 2003).

Previous research (Martin Ginis & Leary, 2006) has suggested that stereotypes associated with not exercising may be stronger than stereotypes associated with exercising. Our results do not support this finding: positive characteristics of exercisers (e.g., energetic, healthy) generally were endorsed more than the corresponding negative characteristics of nonexercisers (e.g., lazy, unhealthy). This discrepancy with previous research may be due to the manner in which characteristics (items) were generated for the present research (i.e., participant generated versus researcher generated) and because each characteristic had both a positive and negative form, unlike previous research where only one evaluative perspective of the characteristic was presented. Another difference between this study and previous research was the method. A list of characteristics was delivered by a person over the phone rather than exerciser status being reported in the context of a paragraph describing individuals (cf. Martin Ginis et al., 2003). In those paragraphs, other information about the target such as university major and hobbies was also included that might have offset the stereotype somewhat. That is, in the current study, participants only rated a list of characteristics of a genderless, ageless exerciser or nonexerciser about whom they had no other information. Thus, the current study was much more about a broad-sweeping generalization about exercisers and nonexercisers. It is possible that additional information such as the gender or occupation of the target might have influenced participants' overall ratings of the person.

One practical implication stemming from this finding is that when developing informational exercise interventions it may be better to emphasize the positive characteristics of becoming an exerciser rather than the negative characteristics associated with continuing to be a nonexerciser. That is, nonintenders might be more open to arguments emphasizing the advantages of becoming an exerciser

than arguments highlighting the dangers or threats inherent in remaining sedentary. Certainly this is consistent with theories of persuasion that suggest that people who are modestly positive regarding a particular viewpoint are more likely to be persuaded toward that argument than people who hold heavily polarized views against the direction of the persuasion (Cacioppo, Petty, Kao, & Rodriguez, 1986). Since nonexercisers do not appear to oppose the positive exerciser stereotype, this means that persuasive efforts capitalizing on the stereotype are unlikely to be met with strongly negative reactions.

The current results also give no indication that nonexercisers are engaging in any effort to manage their image, or the general image of nonexercisers. There is no evidence of any effort to emphasize the strengths of nonexercisers or the weaknesses of exercisers or the opposite—to deemphasize the advantages of being an exerciser or the disadvantages of being a nonexerciser. There are three possible explanations for this. One is that the response format failed to produce a personal salience of the questions. This seems unlikely, however, since each interview opened with a question regarding the person's current activity level and intentions, which should have made their own activity status salient. Another is that nonexercisers simply do not identify with exercise in a way that makes it a threat to their self-image. Future researchers will have to specifically address this question, but previous research by Martin Ginis et al. (2003) demonstrated that having an "exerciser" or "nonexerciser" identity had an omnibus effect regardless of the exercise level of the target (i.e., a dedicated exerciser compared with a "physically active" individual) or of the respondent: exercisers were rated more positively. However, the personal threat of the positive exerciser stereotype to nonexercisers might be low. It is possible that the disadvantage to nonexercisers is still not unacceptable. This is supported by the relatively weaker endorsement of the negative attributes for nonexercisers compared with the positive attributes of exercisers. Whereas the scores for the exercisers approach the end points of the 9-point scale, they tend to mostly hover around the middle of the scale for the nonexercisers. The scores range from 2.30 to 7.77 for exercisers and from 3.26 and 6.15 for nonexercisers, considering all scores from all groups. Conversely, theorizing by Sedikides and Gregg (2003) regarding mnemonic neglect suggested that people are more likely to suppress negative thoughts about a central aspect of themselves rather than a peripheral aspect. According to this argument, if being a nonexerciser is a central aspect of the self, then the nonexercisers will suppress negative information about that aspect of themselves. Because there is no evidence of suppressing negative aspects of being a nonexerciser either among intenders or non-intenders, it seems more likely that exercise status is a peripheral aspect of the self among these individuals. Whether exerciser status is central or peripheral to self or identity needs to be confirmed in future research. However, the current evidence suggests that interventions to increase the salience of exerciser status to the self or identity might be a worthwhile target of intervention.

Third, it is possible that the social desirability level of favoring exercisers has become so prevalent in North American society that it pervades all responses. If this is the case, then we would expect to see incongruence between attitudes toward exercisers and personal behaviors that should result in negative self-evaluations of nonexercisers regardless of their intention status. That is, following our study procedure, nonexercisers might have experienced some negative personal

evaluation. We did not collect any information regarding the respondents' self-perceptions and so more research is required to address this possibility.

Given that beliefs concerning exercisers and nonexercisers are essentially the same regardless of whether a person is physically active suggests that interventions targeting these beliefs can also be the same. That is, since RE, NE-I, and NE-E all endorse a positive exerciser stereotype, interventions that promote the positive characteristics of being an exerciser should not offend any of the three groups and thereby produce negative outcomes. This means similar interventions can be employed to reach a large segment of the population, nonexercisers, and would be more cost effective than having to develop separate interventions for people in different exercise phases (i.e., exercise intenders versus nonintenders). In terms of the "re-aim" perspective (Dzewaltowski, Estabrooks, & Glasgow, 2004), such an approach is more likely to achieve the "reach" and "efficacy" goals of that model. The "reach" is the scope of an intervention—how many people it can reach—and "efficacy" is the extent to which an intervention will be effective, especially given the scope. Thus, the reach and efficacy of interventions are important considerations of implementation for public health purposes. Further study is needed to determine what the exact impact of focusing on "becoming like an exerciser" might be for the two nonexercising groups, however.

There are some limitations of the current research that need to be considered. Whereas the random sampling approach addresses some limitations observed in previous studies, it comes with some limitations of its own. The first is the cross-sectional nature of the design in the current study. Because of the exploratory level of the question and because of the expense associated with random sampling, no longitudinal component of the research was included. Future research should follow up on the current findings to determine whether they can be replicated and whether there is any longitudinal variation in responses or even any effect of having participated in a contrast of exercisers and nonexercisers. In addition, a longitudinal study would help to rule out the possibility that it is the intention to exercise or not that is influencing the beliefs about exercise, rather than the other way around. Another limitation is the self-report of physical activity. This should be corroborated in future by objective observation or indirect assessment of fitness level. Finally, the participants in this study rated the exerciser first and the nonexerciser second. This was done to maximize the possibility of manipulating responses about the nonexercising target. That is, all three groups had the opportunity to reproduce the stereotype of their choice. The exercisers could have rated the exercising target more favorably and the nonexercisers could have rated the nonexercising target more favorably. However, it is also possible that an order effect was present and future researchers may want to consider other presentation orders.

In summary, from the perspective of public health promotions of exercise, the results of this study are encouraging because they suggest that a positive exerciser stereotype is endorsed by exercisers and nonexercisers who intend and who do not intend to begin exercising. We are not aware of other published studies specifically considering the beliefs of nonexercising nonintenders. Thus, promotion of the advantages of being an exerciser might be expected to have more widespread positive effects than highlighting the risks of being sedentary, and yet is unlikely to have any negative effects that might inadvertently support sedentary behavior.

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