Original Research

The Effects of Self-Presentation to Engage in Physical Activity

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ABSTRACT

International Journal of Exercise Science 12(5): 263-276, 2019. In order to improve physical activity levels, it has previously been suggested that the use of rewards can potentially have an impact on exercise behavior. One type of reward, the opportunity to present a good impression in the eyes of others (e.g., self-presentation), has not been previously examined in an experimental task. Therefore, the purpose of this study was to investigate if linking an exercise task to a prosocial, self-presentational reward in the form of a charitable giving opportunity influences the amount of effort expended in a single bout of exercise on a stationary cycle. Participants (N = 108) were randomly assigned to one of four different treatment conditions: (a) Private potential health reward (i.e., control group), (b) Private prosocial reward (cycling for a monetary donation to charity), (c) Public self-presentational reward (cycling results posted on social media), and (d) Both public prosocial and self-presentational rewards. In each condition, participants volitionally cycled at a moderate intensity until they chose not to continue. Analyses using current physical activity levels, altruistic personality, impression motivation, and self-presentation in altruistic behavior as covariates showed that participants in the three immediate reward conditions (b, c, and d) cycled longer than those in the control group, and those in the combined rewards group (charity and social media) resulted in longer cycling duration than those who received only one of those rewards. Findings from this study support the possibility that using motivating rewards is positively associated with effort, particularly when charitable rewards are made public.

KEY WORDS: Motivation, charity donations, rewards, social media, cycling

INTRODUCTION

The beneficial health outcomes of physical activity are well acknowledged (21) and include numerous psychological and physiological health benefits (e.g., weight loss, reduced risk of heart disease, depression, or certain types of cancer) (5). However, knowledge of potential health benefits alone is not sufficient to motivate people to engage in physical activity at recommended levels (8). To bring activity levels up to recommend guidelines, individuals can focus on increasing the frequency and/or duration of exercise sessions. However, finding ways to help people become motivated to increase the amount of time they exercise in each workout session, requires an examination of different mechanisms than attempting to motivate individuals to start exercising more often during the week.

Recently, behavioral scientists have been searching for ways to better understand motivational factors that may influence people's physical activity levels, which can derive from various sources (11, 17, 21, 27). One potential motivational tool includes the use of extrinsic rewards to entice people to give more effort to exercise, especially for physical activities that are not inherently interesting or for people who do not find exercise intrinsically rewarding (17, 27). These extrinsic rewards can be material rewards provided by others, or a reward in the sense that exercise can provide one with the opportunity to create a good impression in others' eyes. This characteristic of a reward can be characterized as a self-presentational component of the reward.

Self-presentation includes both impression motivation (IM) and impression construction (IC). In exercise environments, individuals have a desire to appear as healthy and fit (IM), and they behave in certain ways to create that impression (IC), which can occur through the exercises they choose to do or the clothes they wear (15). In an exercise environment, the impressions that have been examined generally revolve around having the appearance of looking like an exerciser. This focus on physical appearance-based IC and IM has resulted in mixed findings on the influence of self-presentation on exercise. Self-presentational concerns might either facilitate or debilitate physical activity behavior, as people may exercise more to alter their appearance, or people may avoid exercise as a result of social physique anxiety (1, 13, 15).

Outside of a gym setting, one milieu that allows exercisers to freely self-present is social media. Social media sites such as Facebook (FB) provide an opportunity for individuals to post information about their lives, and others can "like" or comment on their status (16, 18, 20). Facebook is one of the most popular social networking sites with over one billion daily active members, who can interact by posting comments or giving and receiving "likes". "Likes" signify appreciation and approval and are thus a reward that can impact what others choose to post and how they self-present. Mehdizadeh (23) explains that uploading photos and videos is very popular, mainly because individuals have the chance to upload or write what they prefer to show to others. Usually, people share photos in which they look the best. They write and post about their success or the fun things that they are doing (e.g., graduating, traveling). FB provides a convenient opportunity for people to construct good impressions in others' eyes because they have the total control to decide in what way they would like to self-present (6, 31). In a physical activity context, people often share details about their workouts on social media (e.g., distance run, photographs of their workouts or competitions), so it provides a unique environment to examine how self-presentation may influence behavior in an exercise context. Additionally, FB has been used in several studies as a means to encourage social support in physical activity interventions, although the impact on physical activity behavior has been mixed (4, 30). However, in those studies, the role of self-presentation within social media has not been examined as potential mechanism for the promotion of physical activity. It is possible that adding self-presentational rewards could increase the frequency of workouts, or improve the quality of the workouts in terms of duration and intensity (15, 22).

Additionally, as social media websites allow individuals to connect with others across the globe, there is still much we do not know about self-presentation across different cultures. Evidently, FB usage rates change among countries. One Middle Eastern country, Turkey, is among the top 10 leading countries with 56 million users on Facebook. Given that there are social media usage disparities within countries, self-presentational motivation in social media should be investigated across cultures. The motives of people to self-present in social media can differ based on these cultural differences. Studies have demonstrated different patterns of social media usage depending on user-identified culture: individualistic vs. collectivistic. For instance, Korean students, raised in a collectivistic culture, are more inclined to seek social support via social media; whereas American students, raised in an individualistic culture, are using social media relatively more for entertainment purposes (19).

Outside of exercise, research on self-presentation more generally has examined ways that individuals wish to convey other socially desirable information and/or images about themselves to other people. Therefore, people are more motivated to show desired behaviors in public than they are in private (2). People like to be appreciated and recognized by others for a desirable behavior, such as helping the elderly, donating to charities, or showing good health behavior (2, 32). Some opportunities currently exist in exercise environments for individuals to exercise for prosocial, altruistic reasons as well, such as joining marathon training teams for charitable causes or using gym equipment that help the environment (e.g., generated energy goes back into the electric grid).

Although the opportunities to create an altruistic prosocial impression in exercise settings do exist, they are limited, and little research exists about self-presentation and exercising for charitable causes. Thus far, experiments have generally taken place in a controlled laboratory setting, such as a series of experiments conducted by Ariely and colleagues (2). The researchers created two different conditions to complete a simple task. In the first condition, participants were told that the task was to click on X and Y on a computer keyboard simultaneously for 5 min. The more clicks they could complete, the more money they could earn to be donated to the American Red Cross, a charitable aid organization. In this condition, the amount of money earned by the participant was confidential and only the participant and the researcher knew the donated amount. Researchers referred to this condition as "private." The second "public" condition included the same task to click on X and Y as much as possible for 5 min. However, this time, participants had to announce the amount earned at the end of the session with the remaining people in that particular room. Participants clicked significantly more on the keyboard in the public condition compared to the private confidential condition.

The work by Ariely and colleagues (2) demonstrates that there is more room for examining self-presentation outside of the predominantly appearance-based focus of the current self-presentation literature in exercise (15). Due to the potential negative consequences of focusing on appearance (e.g., social physique anxiety), examining an altruistic component of self-presentation may provide an opportunity to have a more positive influence on exercise behavior. Additionally, the findings from the Ariely et al. (2) experiment demonstrate that when individuals know altruistic acts are going to be made public, they put forth more effort into the

ensuring they can present a good impression. Therefore, we expect that when individuals have the opportunity to self-present in a public forum such as social media sites, that they will then put even more effort into a task to put forth a positive impression, whether it is the impression of themselves as an exerciser or as an altruistic person.

It is also important to conduct research that includes an examination of gender within self-presentation. Studies on self-presentation in exercise typically include more women than men, as women report higher frequencies of self-presentational concerns, such as social physique anxiety (13). Additionally, women have been viewed as more altruistic, as research shows that women are more likely to partake in charitable giving (e.g. donating money for causes) than men (29). Even though there are numerous studies supporting the gender differences in charitable giving, the essential reason for this difference is not thoroughly explained. In a few attempts to explain this gender gap in charitable giving, researchers explain that females are more prone than males to demonstrate concern and to act like a nurturer which naturally provides them the motive to be altruistic (3). In another study, researchers claim that gender differences in charitable giving may lie in social emotions such as empathy and compassion. Being empathetic is considered as an underlying motivator to be altruistic and women score significantly higher than men on empathy (29).

Therefore, the primary purpose of this study was to examine the effect of self-presentational and prosocial rewards on effort in the form of duration in a cycling endurance task. A secondary purpose was to examine differences based on nationality and gender.

The hypotheses for the study were: (A) Participants in each of the three reward conditions (Private prosocial reward, Public self-presentational reward, both Public prosocial and Self-presentational reward) will spend significantly more minutes on exercise performance compared to participants in the control group (Private potential health reward). (B) Participants in the combined public prosocial and self-presentational reward condition (FB and charity) will spend significantly more minutes exercising compared to the other two reward conditions: exercising for Private prosocial reward (only charity) and Public self-presentational reward (only FB). (C) Exercising for public self-presentation reward (only FB) will lead one to spend more time exercising compared to exercising for a private prosocial reward (only charity).

METHODS

Participants
Institutional Review Board approval for ethical protection of human rights was approved prior to the implementation of this study. There were 108 participants in total (50 females and 58 males), and were between 18 and 35 years of age (*M* = 24.5, *SD* = 4.85). College students were recruited from two different settings: American college students (*N* = 36) and Turkish college students (*N* = 72). Students from both countries were included because it was more pragmatic for the lead researcher and also diversified the sample cross-nationally. Students' English language level is proficient in the Turkish universities; therefore, all procedures and questionnaires were conducted in English.

Participants were randomly distributed across the four treatment conditions, as shown in Table 1. Most participants were Caucasian (88%) while the remaining participants indicated that they were either Asian (5%), African American (4%), or Hispanic (3%). Descriptive statistics for study variables by gender are included in Table 2.

Table 1. Number of participants in each treatment condition by gender.

	Male	Female	Total
Control	15	14	29
Only FB	13	12	25
Only Charity	18	12	30
FB & Charity	12	12	24
Total	58	50	108

Protocol
Participants were recruited through class announcements and flyers. All participants joined the study on a volunteer basis and all gave their written consent prior to participation.

All participants completed questionnaires in a lab setting prior to the cycling session. The packet of questionnaires consisted of demographic information (e.g., age, gender, class, major, and race/ethnicity), the Godin Leisure Time Exercise Questionnaire (GLTEQ), Altruistic Personality Scale, Self-presentation in Exercise Questionnaire (SPEQ), and Self-Presentation in Altruistic Behavior Scale.

Participants were randomly assigned to one of four treatment groups: (a) Private potential health reward - Control (b) Public Self-presentational reward - FB Only (i.e., self-presentational component, results posted on social media), (c) Private prosocial reward - Charity Only (i.e., privately cycling for a monetary donation to charity) and (d) both Public prosocial and Self-presentational reward - FB and charity (i.e., cycling for a monetary donation and results posted on social media).

Participants were randomly assigned to one of four treatment conditions before they entered the lab. First, they were given the Physical Activity Readiness Questionnaire (PAR-Q; 28), a 7-item assessment designed to screen for any potential problems which may be triggered from exercising. Next, participants completed all measures prior to the cycling bout and read a flyer about the health benefits of regular physical activity. Participants were then fitted with a heart rate monitor and asked to sit quietly for 5 min in order to record resting heart rate. Target heart was calculated using the Karvonen formula (Target Heart Rate = [Maximal heart rate (220-age) – resting heart rate] x 0.65 + resting heart rate).

After being fitted with the monitor, participants warmed up on the stationary bike for 2 min at the lowest gear. They were instructed to keep the pace between 66 and 74 rpm, which they could monitor on the bike screen. At the end of the 2-min warm-up, if they had not achieved 65% HRR, the experimenter would increase the gear by one level every 10 s, for up to 3 min, until the participant reached 65% HRR. If the participant's heart rate rose above 65% HRR during the 3 min period, the gear would be decreased by one level every 10 s until they achieved steady state

at 65% HRR. Participants were informed once they reach 65% HRR and then the time started to count for the total exercise minutes. All participants were able to monitor their time and rpm throughout the cycling task. The session concluded when the participant volitionally decided to stop cycling.

Condition 1. Private pro health (control): Participants in all treatment conditions received a flyer about the health benefits of physical activity and exercise, listed in the Centers for Disease Control and Prevention (CDC) website (5). Example outcomes included "Physical activity can help reduce your risk of cardiovascular disease" and "Physical activity can help control your weight." This information was included to prime the participants about potential health benefits of exercise. Participants were asked to cycle as long as they want, and that they could stop at any time.

Condition 2. Public self-presentational reward (FB only): In this condition, the reward was a post on social media, in this case FB. We used FB as the social-media milieu to announce participants' cycling task performances in order to make it visible to others. Participants underwent the exact procedure as the control condition, except that before they started the exercise bout, participants gave their consent that for each 12 min cycled, we would post their total time spent cycling on behalf of them on the University's Kinesiology FB page (i.e., Tom spent 24 min cycling for his health). Thus, a participant who cycled 15 minutes would still get a post that he or she cycled for 12 min unless completed to 24 min, and so on. Times were chosen to be consistent with the charitable donation condition.

Condition 3. Private prosocial reward (charity only): In this condition, the reward was a charity donation. Participants were primed to exercise for altruistic reasons, as they were informed that they would earn $1.00 to be given to a charity for each 12 min cycled. Again, a participant who cycled 15 minutes would still be able to donate only a dollar unless the 24 min mark was completed. Participants chose to donate to a charity from a list prepared by the researcher (e.g., American Red Cross, Feeding for America and UNICEF). At the end of the session, they learned how much they accumulated for their preferred charity.

Condition 4. Combined public pro social and self-presentational reward (FB and charity): Participants followed the same procedures as the only charity group. However, at the beginning of the session they were told that their total time cycled and the total money raised to be donated to their preferred charity would be announced on the university's Kinesiology FB page (i.e., "Tom spent 24 min cycling for his health and earned 2 dollars for American Red Cross"). Their written consent to post on FB was collected in advance.

At the end of the session, for all conditions, a debriefing form was given to participants to explain that that the university Kinesiology FB page was actually fictitious and their cycling results were not posted. In addition, donations were not actually given to charities. Each participant read the debriefing sheet immediately after completing the cycling session.

Statistical Analysis

Physical activity was assessed as METs per week, as measured by the GLTEQ (14). Participants reported the amount and type of physical activity that they engaged in for more than 15 minutes during a 7-day period). A total score for physical activity was calculated by multiplying weekly rates of strenuous, moderate, and light activities by nine, five, and three, respectively (14). The total scores of the GLTEQ scores ranged between 5-79 METs per week.

Altruism was measured with Altruistic Personality Scale (APS; 26). This is a 14-item scale to measure altruistic personality by assessing how often one engages in altruistic acts primarily toward strangers (e.g., "I would donate to charity"). Participants answered on a 5-point scale ranging from never (0) to very often (5). All items were summed to obtain an overall altruistic personality score. The Cronbach's alpha of this scale is reported as 0.84 (26) and Cronbach's alpha for the current sample was 0.78.

The Self-Presentation in Exercise Questionnaire (SPEQ; 7) is a 14-item scale measuring self-presentational concerns while one is exercising, which includes both impression motivation (e.g., "I enjoy the praise I often receive for exercising") and impression construction (e.g., "I exercise so that regular exercisers will like me") subscales. Participants responded using a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). Each subscale consists of 7 items which were summed; therefore the range of possible scores were from 7 to 42 for each subscale. Cronbach's alpha from the current sample was .81 and .82 for the impression motivation and construction subscales, respectively.

To our knowledge no scale currently exists to measure self-presentation in altruistic behavior. Therefore, this questionnaire was specifically designed for this research paper. Adapted from the SPEQ, this measure assesses self-presentational concerns while one is engaging in altruistic behavior. Using the same 6-point Likert scale, items included: "I value to be seen altruistic by others," "I enjoy the praise I often receive for being an altruistic person," "I value the attention and praise offered by others in regard to appearing altruistic," "Appearing altruistic to others is not important to me," and "I want to be thought of as a person who is altruistic." Cronbach's alpha was 0.83, which indicates a high level of internal consistency for the scale.

Lastly, as a check on the experimental manipulation participants were asked to report their perceived value of the one-dollar donation by responding to the statement "I value the donation of a $1 for each 12 min I cycle" using a Likert scale from 1 (strongly disagree) to 6 (strongly agree). It was a one-question scale only applied to a sub-sample of 15 who were in charitable donation groups.

RESULTS

Exploratory Analyses: Preliminary *t* tests were conducted for all variables on gender. The results revealed that there were no statistically significant differences between males and females in terms of self-presentational concerns for exercise, self-presentational concerns in altruistic behavior, and previous physical activity levels (GLTEQ). The only significant gender difference

was for altruistic personality with females being more altruistic than males, $t(106) = -2.306$, $p < 0.05$. However, there was no significant difference in cycling duration between males ($M = 25.43$, $SD = .88$) and females ($M = 23.86$, $SD = 1.04$) overall.

Table 2. Means and standard deviations of all variables by gender.

	Male	Female
GLTEQ- PA Levels	37.66±21.46	35.30±17.35
APS -Altruistic Personality Scale	45.83±1.04	49.08±1.00
SPABS- Self-presentation in altruistic behavior scale	20.12±4.47	20.42±3.87
SPEQ- Impression Motivation (IM)	29.43±6.53	28.28±5.02
SPEQ- Impression Construction (IC)	18.71±6.24	17.14±5.99

Independent sample t tests were conducted for all variables on Nationality. There were no significant differences in minutes cycled between Turkish (M = 24.26, SD = .79) and American (M = 25.58, SD = 1.27) students; however there were significant differences in terms of previous physical activity levels and altruistic personality scores. American students ($M = 43.53$, $SD = 21.78$) were more physically active compared to Turkish students ($M = 33.08$, $SD = 17.57$) with $t(106) = 2.683$, $p < .05$. In addition, American students ($M = 49.94$, $SD = 8.53$) were more altruistic compared to Turkish students ($M = 46.03$, $SD = 6.53$) with $t(56.133)= 2.422$, $p<.05$ (df adjusted for unequal variances with the Levene test). Additionally, the Impression Construction subscale of self-presentation differed between Turkish (M = 18.86, SD = 6.55) and American (M = 16.22, SD = 4.89) students. There were no differences in self-presentation in altruistic behavior or the Impression Motivation scores.

Table 3. Descriptive statistics by condition.

	Control M (SD)	Only FB M (SD)	Only charity M (SD)	FB & Charity M (SD)
N	29	25	30	24
Minutes cycled	18.97 (4.31)	24.48 (6.26)	25.00 (5.46)	31. 71 (5.92)
GLTEQ	34.21 (18.48)	46.40 (6.64)	47.37 (7.71)	47.88 (8.10)
APS	47.66 (7.60)	46.40 (6.64)	47.37 (7.71)	47.88 (8.10)
SPABS	19.41 (4.96)	20.20 (3.44)	20.00 (3.79)	21.67 (4.26)
SPEQ (IM)	28.34 (6.59)	28.92 (6.61)	29.50 (3.93)	28.58 (6.51)
SPEQ (IC)	17.83 (6.47)	18.32 (5.46)	17.20 (4.88)	18.79 (7.90)

Next, we calculated correlations between the variables of interest and minutes cycled. All variables were moderately correlated except for impression construction (Table 4).

Table 4. Correlations between all study variables

	Minutes	PA	APS	SPABS	IC
Minutes					
GLTEQ	.242*				
APS	.273**	.176			
SPABS	.293**	.018	.374**		
SPEQ (IC)	.002	-.087	-.237*	.068	
SPEQ (IM)	.206*	.161	.078	.302**	.349**

*$p < .05$, ** $p<.01$

In order to ensure that the participants found the reward meaningful, the mean score of the manipulation check for the perceived value of one dollar was 5.27 with a SD of .70, suggesting that participants found this amount valuable.

The primary dependent variable was cycling duration as measured in minutes. Because the initial analyses indicated that there were no differences in minutes cycled based on nationality or gender, they were not included in further analyses to test the initial hypotheses. An ANOVA was first conducted to assess differences in minutes cycled between treatment groups. Results indicated a significant effect for condition $F(3,104) = 23.69$, $p < .001$ (Figure 1) . The ANOVA was supplemented with three different planned contrasts to test hypotheses (a), (b) and, (c). The first contrast showed that the Control group ($M = 18.99$, $SD = 4.30$) cycled for less time than the three experimental conditions combined ($M = 24.09$, $SD = 3.57$), $t(104) = 6.73$, $p = .001$, which supported Hypothesis (a).

The second contrast compared the Public prosocial and Self-presentational reward condition (FB and charity together) ($M = 31.70$, $SD = 5.92$) with the two other experimental conditions combined: Private prosocial reward (only charity) and Public self-presentational reward (only FB) treatment conditions, ($M = 14.37$, $SD = 2.68$). The contrast was significant, $t (104) = 5.25$, $p = .001$. This supported Hypothesis (b) that FB and Charity combined would result in longer cycling times than Facebook and Charity alone.

Hypothesis (c) compared exercising for Self-presentation reward only (for public recognition on social media FB only), ($M = 24,28$, $SD = 6.26$) to exercising for a Private prosocial reward only (private charitable giving), ($M = 25$, $SD = 5.45$). Results showed that there was no significant difference $t(104) = .485$, $p = .629$.
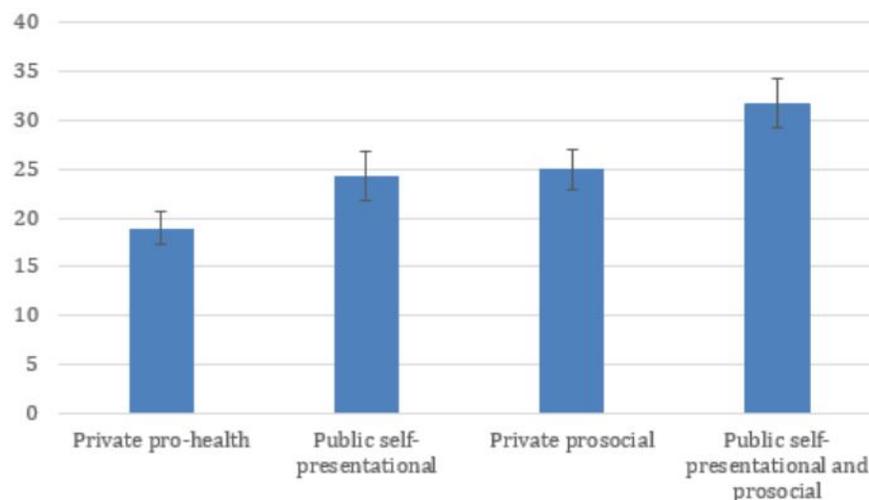

Figure 1. *Mean Minutes Cycled for Each Condition.*

In addition to the initial ANOVA and planned contrasts, we conducted an ANCOVA to control for variables that significantly correlated with minutes cycled: self-reported physical activity

levels ($r = .24$, $p < .05$), altruistic personality ($r = .27$, $p < .05$), self-presentation in altruistic behavior ($r = .29$, $p < .05$), and impression motivation ($r = .20$, $p < .01$). The ANCOVA was significant $F(3,100) = 24.722$, $p < .001$, $\eta^2 = .43$. Post-hoc pairwise comparisons indicated that the control group differed significantly from only FB ($p<.01$), only charity ($p<.001$), and only FB and charity, which also supports Hypothesis (a). The FB and charity condition was significantly higher than the other three groups as well ($p<.001$), supporting hypothesis (b). Lastly, the only FB condition did not significantly differ from the only charity condition, which does not support hypothesis (c), but is consistent with the findings from the ANOVA.

DISCUSSION

Self-presentation theory proposes that individuals are motivated to manage the impressions others see in them, specifically when other people are present. However, little is known about self-presentational motivation through social media (e.g., FB) for promotion of physical activity behavior. Therefore, the primary purpose of this study was to investigate if linking an exercise task to a prosocial, self-presentational reward can positively influence physical activity behavior. The findings of the current study suggest that when such rewards are involved in exercise settings, people are more motivated to persist longer at an exercise task. Additionally, participants cycled for even longer when the prosocial reward was strengthened by adding a self-presentational component via the used of social media (e.g., Facebook), and our findings indicate that self-presentational concerns have the potential to promote effort in an exercise task.

In previous research on self-presentation in exercise, researchers have included impression motivation (IM) and impression construction (IC) as components of self-presentation in exercise, based on the idea that individuals, particularly women, have the desire to be seen as an exerciser and adjust their behavior accordingly (13, 15). In previous research, IM has been more strongly linked to exercise behavior than IC, as the desire to make a positive impression may matter more than the specific methods they use to do so (7). In the current study, by providing an environment in which the methods of self-presentation are controlled (e.g., researchers specified the information that would be posted on social media), then the only control the participants had over their public impression was how long they cycled; therefore, in order to make a positive impression, individuals were motivated to exert more effort and cycle for a longer duration.

This was supported by our finding that the components of self-presentation, impression motivation (IM), impression construction (IC), and self-presentation in altruistic behavior had differing impacts on duration in this task. IM was correlated with minutes cycled, but impression construction (IC) was not. This is likely due to the conceptualization of IM and IC within the measure specifically. As IM reflects the desire to be seen as an exerciser in general, whereas IC reflects specific behaviors that individuals undertake to be viewed as an exerciser (e.g., I often wear exercise clothing or I emphasize my athletic ability), exercising for a prosocial behavior like a charitable cause is not reflected in the specific IC subscale items. Therefore, IM likely has a stronger impact on the actual behavior (i.e., minutes cycled) when that behavior is made public. IM was also significantly correlated with self-presentation in altruistic behavior,

whereas IC was not. This finding may indicate that those who have the desire to be viewed as someone who engages in health behaviors, may also be more likely to want to make a good impression overall, including being viewed as someone who engages in altruistic behavior. Therefore, when considering the impact of self-presentation on exercise behavior, it is possible that the desire to make a good impression is more important than how that impression is constructed in exercise.

When we controlled for previous physical activity, as well as other psychological constructs that may impact how strongly exercisers have the desire to self-present (IM, self-presentation in altruistic behavior, and altruistic personality), we still found that cycling for a positive, prosocial, public impression influenced participants to cycle for longer. This finding suggests that when individuals are put into a situation where they have the opportunity to make a good impression as both an exerciser and an altruistic person, that it will have an impact on behavior even if they are not predisposed to self-presentation concerns.

We did not expect to find that there would be no differences in minutes cycled based on gender or nationality. The exploratory analyses demonstrated that female participants had significantly higher altruistic personality scores compared to male participants, and this aligns with findings of previous studies (3, 12, 24). Additionally, American students were more altruistic than Turkish students in this sample. Therefore, we assumed that women and American students would be more motivated to exercise in charitable conditions and would cycle longer periods than their counterparts. However, our results did not support this assumption, and it is possible that the desire to make a good impression is more important than being privately altruistic.

Another difference between the American and Turkish students were that American students turned out to be more physically active than Turkish students, although when controlling for physical activity, this did not impact the overall results. A potential reason for this difference might stem from sample recruitment. For the American sample, Kinesiology students participated to this study while Psychology and Business Administration students were involved in the Turkish sample. There were not any Kinesiology students in the Turkish sample as the field is non-existent in most Turkish Universities; however, some departments include similar fields such as sport studies or physical education. This finding aligns with other studies that point out the low leisure time physical activity levels in Turkish population, and drew attention to the need of additional physical activity facilities to initiate a solution to this problem (9).

Future Research Directions: The findings from the current study have the potential for future research in many exercise environments. Recently, events that associate exercise with charitable causes (e.g., breast cancer marathons, runs for charity miles via smart phone apps) are getting more popular, but the effects of charitable cause on exercise motivation is not thoroughly examined in the field of sport and exercise psychology. Furthermore, social media websites such as Facebook, Instagram and Twitter are becoming milieus in which people post and talk about their exercise goals and routines. Thus, more research could be conducted to examine the effect

of social media on physical activity behavior with the intention to increase physical activity levels.

As this study is one of the first to attempt to examine how prosocial, self-presentational rewards can influence exercise behavior, there are a few limitations that should be addressed in future research. First, the experiment involved only one bout of exercise. If people are to receive the health benefits of exercise, they must exercise on a regular basis. We do not know if the self-presentational components of rewards will strengthen over time, or if the effect would lessen as the novelty of the task wears off. Additionally, we did not investigate the timing of the reward, which is an important motivational component of rewards (2, 25, 32). For example, future studies could investigate if delayed Facebook posts and/or charitable donations (e.g., posting exercise results after a week or donating to charity in 2 weeks) would generate different results. Therefore, more longitudinal studies are needed to examine the effects of self-presentational, prosocial rewards over time.

In conclusion, lessening the problem of physical inactivity will require being more up-to-date with new trends (e.g., social media) to create attractive solutions for people to adopt a physically active lifestyle. This research paper was an effort to draw attention to these methods, and the results suggest that incorporating immediate rewards such as exercising for charitable cause and/or social media posts have the potential to impact persistence and effort on an exercise endurance task. More research of this nature needs to be conducted to develop innovative methods to address the multidimensional issue of physical inactivity.

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