

MOTIVATIONS TO EXERCISE, CONSTRUAL LEVEL THEORY, AND SOCIAL MEDIA

**DO DIFFERENT TYPES OF MOTIVATIONS TO EXERCISE IMPACT THE WAY  
INDIVIDUALS PERCEIVE EXERCISE?**

**by**

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**Abstract**

The present study examined the impact that health and appearance motivations to exercise have on exercise perception as well as how social media may affect these motivations and perceptions. Previous research on construal level theory (CLT) has found that there are two levels of construal: high and low. Lower levels of construal are associated with concrete categories that are more specific, whereas, higher levels of construal are associated with abstract categories that are broad. Little research on motivations to exercise considers the impact on what is thought of as exercise. This study applied CLT as a theoretical lens to understand these different connections. It was hypothesized that participants high in appearance motivation would have a narrower categorization (low-level construal) of exercise activities and participants high in health motivations would have a broader (high-level construal) categorization of exercise activities. It was also hypothesized that individuals who spend more time watching fitness content on social media will have higher appearance motivations (low-level construal). Participants completed an online survey about exercise, their motivations to exercise, and fitness content on social media. A correlational analysis indicated that motivations to exercise was not associated with perceptions of exercise category breadth. Additionally, the results did not support the second hypothesis that individuals with high social media fitness exposure will be more appearance motivated; results revealed that there was a strong positive correlation between motivations to exercise and a strong positive correlation between structured and unstructured exercises. It is critical to continue research on the impact motivations to exercise have on how exercise is perceived because fitness has become such a prominent part of society.

*Keywords:* exercise, construal level theory (CLT), social media, motivations, health-related, appearance-related.

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Do Different Types of Motivations to Exercise Impact the Way Individuals Perceive Exercise?

### **Why Should Motivations to Exercise be Studied?**

What is motivation and how does it impact the way people perceive life around them? How do motivations impact the willingness to do something or partake in a specific behavior? More specifically, how do certain motivations impact how an individual perceives exercise? Most of the previous research on exercise as well as motivations to exercise focuses on structured forms of exercise like working out at the gym, disregarding unstructured forms of exercise like walking the dog or playing outside. The fitness industry continues to evolve through new technologies such as social media, therefore, it is important to explore the rationale behind exercise motivations and behavior with these social media variables in mind. The types of activities that are considered exercise vary across individuals. The Oxford dictionary defines exercise as “activity requiring physical effort, carried out to sustain or improve health and fitness”. That definition is vague and can be interpreted in many ways depending on an individual’s motivations to exercise. Physical activity is one of the many tools individuals use to maintain a healthy lifestyle. Social media applications have played a major role in the abundance of fitness-related content. This fitspiration content has also led to the prevalence of body image concerns amongst individuals that are motivated to exercise for appearance-related reasons. Observing the relationship between appearance-related motivations and health-related motivations to exercise is important because it can help uncover how these two very diverse motivations impact exercise behavior. Studying these topics together may reveal how different motivations orient people to certain exercises and how those primary motivations could be what is leading people to choose a particular exercise choice. Studying different types of motivation

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that contribute to what is perceived as exercise and how fitness impacts exercise behavior can help increase exercise among individuals.

### **Why Do People Exercise?**

There are many reasons why an individual may choose to exercise. Studies that investigate the relationship between motivations to exercise and exercise behavior look at the many factors that impact motivations to exercise. There is an abundance of studies supporting the physical and mental health benefits of exercise. The real question is why people choose to exercise. Many individuals may choose to exercise due to external motivations, feeling as though there is an obligation to exercise which can be associated with motives of enhancing appearance (Teixeira & et. al, 2012). Some individuals may choose to exercise because of autonomous reasons and engage in behaviors due to motivations that are consistent with intrinsic goals that come from the self (Gonçalves, & Gomes, 2012).

Multiple studies assess the motivations to exercise via Self-Determination Theory (SDT); Edmunds & et al., 2006; Gonçalves, & Gomes, 2012; Reinboth & et al., 2022; Sebire & et al., 2009; Teixeira & et. al, 2012; Wilson & et al., 2008). This theory explains human motivations by exploring the different types of motivations that are self-determined or controlled and regulate behavior (Reinboth & et al., 2022). The two main categories of the SDT that regulate an individual's behavior are the internal and external regulations of motivation. Intrinsic motivations are self-directed by an individual's personal interests. For instance in relation to exercise, an individual can strengthen their skills through various forms of exercise producing feelings of enjoyment, accomplishment, and satisfaction (Edmunds & et al., 2006). Individuals who exercise due to internal motivations are usually more satisfied with their bodies and have greater behavioral persistence although those internal motivations may also result in negative

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outcomes like exercise dependence (Reinboth & et al., 2022). External regulation of motivation can be described as controlled motivations led by external indicators of worth to gain approval of others (Reinboth & et al., 2022; Teixeira & et. al, 2012). Individuals who exercise due to external motivations may be motivated to exercise to meet others' expectations and feel as though they must exercise (Sebire & et al., 2009). These two regulations of motivation can be categorized into two types of motivations to exercise, health-related motivations, and appearance-related motivations to exercise.

### **Health-Related Motivations Impact on Exercise Behavior**

Motivations that are regulated by self-improvement and the enjoyment of physical activity are linked to health-related motivations to exercise. Positive outcomes like increased psychological well-being, body image, self-worth, and self-esteem have been linked to individuals who have intrinsic motivations or health-related motivations to exercise (Prichard & Tiggemann, 2008; Vartanian & et al., 2011). These intrinsic motivations are self-determined, with behaviors embedded in personal improvement as the motivator and enjoyment rather than external factors as the motivator (Murcia & et al., 2008). Even if an individual is motivated to start exercising because of appearance-related reasons, they can shift towards a better understanding of the health benefits resulting in increased health-related motivators (Ingledeu & Markland, 2008). In an 8-week yoga study conducted by Cox & et al. (2016) researchers followed students who registered for yoga classes on campus two-to-three times per week. The yoga classes were taught by two similar instructors highlighting that their classes enhance physical strength and endurance (Cox & et al., 2016). These students practiced a series of yoga poses while focusing and paying close attention to their breathing, which was an essential part of creating and establishing present awareness in these classes. Multiple scales and tests were used

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to assess students' body perception, body shame, physical self-concept, reasons for exercise, and state mindfulness (Cox & et al., 2016). Participants showed a strong decrease in self-objectification and a strong increase in their understanding of the physical self-concept and health-related reasons for exercise, as well as significant increases in state mindfulness. This significant decrease in how much participants were concerned about their appearance (self-objectification) during the study are consistent with previous studies demonstrating the negative relationship between yoga participation and self-objectification (Cox & et al., 2016). It is believed that the strong emphasis on the movement and feeling of one's body is what may help individuals shift their view of their bodies from aesthetic or external aspects to more functional or internal aspects (Cox & et al., 2016). Lastly, the results of this study support the objectification theory that environments with less emphasis on the appearance of one's body should reduce self-objectification (Cox & et al., 2016).

Many studies that investigate exercise motivations use the self-objectification questionnaire to assess exercise behavior because of the self-objectified or appearance-related and non-objectified terms used (Cox & et. al, 2016; Huang & et al., 2007). Understanding what people value about their bodies is essential in research on motivations because it uncovers the real reasons they choose to exercise. People who are interested in improving their physical coordination, feeling physically stronger, and healthier in general, would participate in physical activities that reflect these non-objective factors of the self. In a study exploring the effects of hatha yoga and resistance training on mental health researchers found that both exercises positively impact the quality of life, depression, body image, self-esteem, and fatigue levels while also decreasing depression symptoms (Taspinar & et al. 2014). When comparing both types of exercises hatha yoga improved fatigue, self-esteem, and quality of life more than

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resistance training, while resistance training improved body image more than hatha yoga (Taspinar & et al. 2014). When people are motivated to exercise to improve their quality of life, self-concept, and life satisfaction, they participate in physical activities that are in line with these goals such as yoga and resistance-based exercise (Taspinar & et al. 2014). When an individual is internally motivated to work out these types of exercise environments like group training or even training with a personal trainer it has been shown to increase adherence to different types of exercise (Heiestad et al., 2016). Resistance-based exercise in these types of studies can be best described as a full body workout consisting of multiple resistance-based exercises such as the chest press, lat-pull down, cable tricep extension, leg extensions, etc. (Heiestad & et al., 2016 & Taspinar & et al. 2014). These types of workouts also include a warm-up before the workout and a cool-down after it is complete which includes dynamic/static stretches. Motivations by self-directed reasons that are health-related connect to participation in holistic or other forms of exercise outside of the fitness environment and resistance forms of exercise; these forms of physical activity are also negatively associated with appearance-related reasons (Prichard & Tiggemann, 2008). This implies that people who are motivated by health-related reasons may consider the abundance of physical activities that they can choose as exercise.

### **Appearance-Related Motivations Impact on Exercise**

External or appearance-related motivations to exercise can be described as a controlled form of motivation regulation, behaviors that are rooted in others' expectations of them and ego enhancement as the motivator (Edmunds & et al., 2006). Whereas internal or health-related motivations to exercise are described as a behavior that is autonomous. Since it is regulated by an external force an individual may feel pressured to engage in a behavior (Edmunds & et al., 2006). For example, motivations that are regulated by anything that connects to improving one's

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appearance are associated with external motivations to exercise. Negative outcomes such as disordered eating, body image concerns, decreased self-esteem, increased body dissatisfaction, and negative psychological well-being have been associated with appearance-related motivations (Prichard & Tiggemann, 2008; Vartanian & et al., 2011).

Self-objectification is a recurring factor that is linked to appearance-related motivations in exercise motivation research (Cox & et. al, 2016; Huang & et al., 2007). Appearance-related motivations to exercise such as weight loss, sex appeal, and gaining firm-sculpted muscles increases external regulation, in other words, people continue to exercise due to superficial or appearance-related reasons as opposed to various health-related reasons (Ingledeew & Markland, 2008). These types of motivations are purely appearance-driven, based on enhancing physical attractiveness and gaining recognition for exercise (Sebire & et al., 2009). Research examining exercise in a fitness center environment was divided into two categories, group fitness classes and individual workouts. These group fitness classes can be organized into three categories: cardio-based, weight-based, and yoga-based. Individual workouts are classified into only two categories: cardio-based and weight-based (Prichard & Tiggemann, 2008). Using the objectification theory (Fredrickson & Roberts, 2017) researchers found that individuals that spend more time exercising in a fitness environment like cardio-based exercises increase levels of self-objectification and are negatively associated with body esteem (Prichard & Tiggemann, 2008). These appearance-related motivations orient people to certain exercises while overlooking the various health-related benefits and only considering the appearance benefits. This suggests that people who are motivated by appearance-related reasons may not consider the various forms of physical activity that count as exercise. The prevalence of cell phones and social media may



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be an influential variable in these appearance-related motivations to exercise and an important factor to investigate.

### **Social Media's Impact on Motivations and Exercise Behavior**

Over the last decade, social media has become an important part of people's daily routines due to its high accessibility and addictive nature. Alongside the growth of technology, there has also been an abundance of social media platforms such as Facebook, Twitter, Instagram, Pinterest, and Snapchat. On these popular platforms, users can communicate with others, and share content, ideas, opinions, etc. There are many online communities that are geared towards common interests and niches. The fitness and health community on social media is growing every year due to the current popular fitness trend promoting a healthy and fit lifestyle to others (Tiggemann & Zaccardo, 2015). Fitness influencers portray “fitspiration” as a motivator by promoting physical activity in conjunction with information related to diet and exercise (Boepple & et al., 2016). Users often post their progress pictures using popular fitness hashtags like #transformationtuesday to display their weight loss and increase the audiences' personal desire to exercise (Vaterlaus & et al., 2015). Popular fitness influencers post their fit physiques, and workout videos providing tips on how to lead a healthy lifestyle (Simpson & Mazzeo, 2017). Popular hashtags like “#gettingswol”, “#fitnessgoals”, “#thinspiration”, “#athletic fitspiration”, and “#muscular fitspiration” are meant to inspire others on their fitness journey. Some look at this new trend as a supportive community because it encourages the audience to work out by providing specific diets and online workout routines (Norton, 2017).

Many people that use and follow these popular hashtags compare their bodies to the cultural ideals of beauty standards in the media (Robinson & et al., 2017). Although many influencers portray a healthy lifestyle, the message is being betrayed by their physical attributes.

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Fitness influencers are portraying what it means to be fit with their bodies in pictures and videos that are being directed in the fitness community. This can have negative impacts on users using fitspiration images as a motivator to exercise because it is deeply rooted in appearance-related reasons which increase the risk of body dissatisfaction (Prichard & et al., 2020). Fitspiration inspires people to achieve these idealized body images and the main motivators to exercise after scrolling fitspiration on social media are to look good, lose weight and improve shape (Simpson & Mazzeo, 2017). The appearance-related motivations to exercise derive from social media platforms that push the narrative that structured forms of physical activity like exercising at the gym or following a home workout program are the only ways to exercise. Both appearance-related motivations and health-related motivations to exercise may have an impact on how people perceive exercise.

### **Construal Level Theory (CLT)**

Trope & Liberman (2010) describe Construal Level Theory (CLT) as, “the relationship between psychological distance (time, space, social) and an individual’s mental representations of objects, events, situations, etc.”. High and low psychological distance are the two distinct categories of psychological distance that can be connected to an event, object, or situation (Slade & et al., 2017). A mental representation of high psychological distance is associated with being thought of in a more abstract way with fewer concrete details (Trope & Liberman, 2010). Whereas low psychological distance is associated with being thought of in a more concrete way with specific details (Liberman & et al., 2002). The differences between construal levels are linked to differences in the abstract and concrete category breadth.

It has been found across multiple studies that high levels of construal are associated with many broad and abstract categories (Kim et al., 2016; Krüger et al., 2014; Liberman et al., 2002;

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Prieler & Choi, 2014; Trope & Liberman, 2010). These abstract categories may also be divided into multiple subcategories because individuals consider the breadth of possibilities in those categories (Krüger et al., 2014). According to CLT, individuals do not consider the concrete features of high-level construals disregarding detailed information. Therefore, there is a wider range of possibilities to consider resulting in many specific instances making up multiple categories (Krüger et al., 2014). In contrast, low levels of construal are associated with few specific and detailed categories. These concrete categories are not divided into as many subcategories since they are more detailed (Liberman & et al., 2002). Additional research highlights the various external factors that play a part in an individual's thought processes, which can impact the relationship between decision-making and construal level (Fiedler, 2007). When comparing decision-making to the construal level, any factor that may impact levels of construal can influence an individual's decision-making and actions (Fujita et al., 2006). Lower levels of construal are associated with concrete categories that are more specific and narrow, whereas, higher levels of construal are associated with broad and abstract categories that are broad (Kim et al., 2016; Krüger et al., 2014; Liberman et al., 2002; Prieler & Choi, 2014; Trope & Liberman, 2010).

### **The Present Study**

The present study examines the relationship between motivations to exercise and how those motivations impact individuals' perceptions of exercise. It also evaluates the connection between appearance-related reasons to exercise influenced by high social media exposure compared to less social media exposure. This study builds on previous research by further examining the impact motivations to exercise have on how people identify exercise. Previous research has used different methods such as self-objectification scales and self-determination

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theory to research the different motivations to exercise (Cox et al., 2016; Matsumoto et al., 2021; Murcia et al., 2008; Prichard & Tiggemann, 2008; Reinboth et al., 2022; Sebire et al., n.d.; Teixeira et al., 2012; Wilson et al., 2008). Both measures are utilized to assess individuals' motivations to exercise and link them to exercise behavior. This study instead used the Functions of Exercise scale (FES) and applied CLT as a theoretical lens to understand how these different relationships are connected. It was hypothesized that individuals with a higher appearance/weight subscale average (lower-level construal) would have a narrower view of what they consider as exercise and will include fewer activities in the category of exercise. In comparison, individuals with a higher health/enjoyment subscale average (higher-level construal) will have a broader view of what they consider as exercise and will include more activities in the category of exercise. It was also hypothesized that individuals who are heavily influenced by “fitspo” content will have a narrower view (higher-level construal) of what they consider exercise.

### **Methods**

#### **Participants**

Prospective subjects were required to be at least 18 years old and any subject who struggles with eating disorders, body image issues, or any mental health issues regarding appearance was excluded from the study. One hundred and three participants (46.15% female, 51.93% male and 0.96% third gender/non-binary) were recruited from Purchase College, Amazon Mechanical Turk, Instagram, and members and employees from F45 Scarsdale, a gym in Westchester. The ages of participants ranged from 18-20 years old (9.62%), 21-29 years old (27.89%), 30-39 years old (33.65%), 40-49 years old (18.27%), 50-59 years old (7.69%), 60 years or older (2.89%). Participants' ethnicities included White (75.73%), Black or African

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American (7.77%), American Indian or Alaskan Native (0.97%), and Asian (7.77%). Students enrolled in Intro to Psychology and Research Methods II classes received partial course credit. Participants that were recruited from Amazon Mechanical Turk were monetarily compensated for their time. No form of compensation was given to the other participants who participated.

Table 1. *Demographic Characteristics of the Sample*

	<i>n</i>	%
<b>Gender Identity</b>		
Male	54	51.92%
Female	48	46.15%
Non-Binary	1	0.96%
Other	1	0.96%
<b>Ethnicity</b>		
White	78	75.73%
Black or African-American	8	7.77%
Asian	1	0.96%
Native Hawaiian or other Pacific Islander	8	7.77%

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Other	8	7.77%
<b>Age</b>		
18-20 yrs old	10	9.62%
21-29 yrs old	29	27.89%
30-39 yrs old	35	33.65%
40-49 yrs old	19	18.27%
50-59 yrs old	8	7.69%
60 yrs old +	3	2.89%

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### **Materials**

Participants completed an online survey made with Qualtrics, an online survey software. Participants provided their consent before beginning the survey.

**Demographic Survey.** The demographic survey (Appendix A) consisted of three questions. Participants were asked about their preferred gender identification, age, and ethnicity.

**Weight and Appearance/Health and Enjoyment Subscales.** Participants were instructed to fill out a questionnaire on their motivations to exercise. They completed the Functions of Exercise Scale (Appendix B) to rate appearance-related and health-related motivations to exercise on a scale from 1 (*do not agree*) to 7 (*strongly agree*). The weight and appearance subscale has nine questions such as “I exercise because I want to look good,” “I feel bad about myself if I don’t exercise,” “It makes my clothes look better,” etc. The health and enjoyment subscale includes seven questions such as “I exercise to improve my physical stamina,”

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Exercise releases tension,” “I want to be strong and healthy,” etc. Higher averages on the subscales indicate a higher motivation for either appearance-related or health-related exercise motivations.

**Exercise Activities (Category Breadth).** The exercise activity (Appendix C) contained two different parts. Participants were directed to part A where the measure of category breadth was measured by listing as many exercise activities as possible. Next, participants viewed a randomized list of 50 activities that included 25 structured and 25 unstructured forms of exercise. Activities such as powerlifting, boxing and cycling were included in the structured exercise category. In the unstructured exercise category activities such as meditating, mowing the lawn, and walking the dog were included.

**Social Media Questionnaire.** Participants were asked to complete a brief social media questionnaire (Appendix C) that reflects the “fitspo” community on social media. In this questionnaire, participants were asked about how much fitspo content they consume on social media daily. Questions such as how often fitspo content shows up on their social media apps and how often they scroll through fitspo content on social media daily. Along with a few questions about their opinions of the influence, social media may have on exercise.

### **Procedure**

Participants were provided a link to complete an online survey on Qualtrics. Students from SUNY Purchase were provided with the link through their college’s Moodle page; participants that were recruited from Amazon Mechanical Turk were provided the link through those platforms. Before starting the survey participants were required to complete the consent form before moving on. Participants completed the demographic questionnaire followed by the appearance and health motivation subscales of the Function of Exercise questionnaire. In the

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next section of the survey participants completed the exercise activity (category breadth) followed by the final section, the social media questionnaire. It was expected that the experiment would take about 15 minutes for most participants to complete.

After completing the study, participants were provided a debrief form explaining the purpose of the study and thanking them for their participation in this research. Contact information of the researchers and the SUNY Purchase Counseling Center was provided if any individual felt uncomfortable while completing this survey. Lastly, all participants were redirected to a survey asking if they participated in this study to receive compensation for their participation, they needed to provide their name and SUNY Purchase email. This information was deleted after the study was completed to maintain anonymity.

### **Results**

#### **Descriptive Analysis**

Six participants from the study were excluded from the analyses due to incomplete responses. In this study, out of the 103 participants more than half of the participants (55.34%) was recruited from F45 Scarsdale, Amazon Mechanical Turk, Instagram, and by word of mouth. The remaining participants were recruited from Purchase College (44.66%). These students were enrolled in one of the two introduction to Psychology (82.50%) and Research Methods II classes (17.50%) during the 2022 fall semester. Participants reported that fitness content shows up on their social media apps zero times a day (1.94%), one to two times a day (41.75%), three to four times per day (32.04%), five to six times per day (5.83%) and seven or more times per day (18.45%). Participants reported that they scroll through fitness content zero times a day (7.77%), one to two times a day (38.84%), three to four times per day (30.10%), five to six times per day (10.68%) and seven or more times per day (12.63%). Participants were asked to estimate how



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many “fitness influencers” they followed on social media. They reported that they follow zero fitness influencers (16.51%), one to two fitness influencers (17.48%), three to four fitness influencers (33.01%), five to six fitness influencers (11.65%), and seven or more fitness influencers (21.36%). Lastly, participants were asked if they thought this content or “fitspo” influencers impacted the way they view exercise. (63.12%) participants reported that they think this content impacts the way they view exercise and (36.89%) reported that they do not think it does. The average of each participant’s answers to the subscale questions was used to calculate the overall average for the health/enjoyment motivation subscale ( $M = 4.98$ ,  $SD = 1.28$ ), and the weight/appearance motivation subscale averages ( $M = 4.65$ ,  $SD = 1.34$ ). Participants' sum total of structured exercise ( $M = 20.43$ ,  $SD = 6.01$ ) and unstructured exercise activities ( $M = 13.30$ ,  $SD = 6.20$ ) identified as exercise was used to calculate the sum total of each exercise category.

Although the hypothesized correlations were not significant, the results from a correlational analysis indicate that there was a significant positive correlation between the appearance and health motivation subscales,  $r(101) = 0.52$ ,  $p = .001$ . There was also a positive correlation between the identified structured and unstructured exercise activities,  $r(102) = 0.23$ ,  $p = 0.02$ .

### **Inferential Analysis**

It was hypothesized that participants who report higher motivations to exercise for appearance reasons (low-level construal) will have a narrower categorization of exercise activities (gym, group fitness classes, boot camps, etc.). A correlational analysis was conducted to examine the strength of the relationship between participants’ averages of the weight/appearance subscale (low-level construal) ( $M = 4.65$ ,  $SD = 1.34$ ) and sum total of exercises identified from the list of structured activities ( $M = 20.43$ ,  $SD = 6.01$ ). Results indicate that there was no significant correlation found between the list of identified structured exercises

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and the weight/appearance subscale averages,  $r(100) = -0.08, p = 0.43$ .

In contrast, it was hypothesized that participants who report higher motivations to exercise for health reasons will have a broader categorization (high-level construal) of exercise activities (gym, group fitness classes as well as hiking, walking, biking, etc.) The second correlational analysis measured the strength of the relationship between participants' averages of the health/enjoyment subscale (low-level construal) ( $M = 4.98, SD = 1.28$ ) and the sum total of exercises from the list of unstructured activities ( $M = 13.30, SD = 6.20$ ) that participants identified. Results indicate that there was no significant correlation found between the list of unstructured exercises and health/enjoyment subscale averages,  $r(100) = -0.05, p = 0.62$ . These results contradict the predicted hypothesis that participants that are motivated by appearance-related reasons to exercise would have a significantly narrow categorization of exercise activities and participants who are motivated by health-related reasons to exercise would have a significantly broader categorization of exercise activities.

A secondary hypothesis investigated whether social media impacts the way individuals perceive exercise. It was hypothesized that individuals who are motivated to exercise for appearance-related reasons (lower level of construal) are impacted by fitness-related content on social media. Four separate independent-sample t-tests were conducted to examine the strength of the relationship between the impacts of social media, the structured and unstructured exercise totals, as well as the appearance and health subscale averages. Participants were placed into two groups based on responses to the question, "Do you think this content and/or these "fitspo" influencers impact the way you view exercise?" The first independent-sample t-test, shown in Figure 1., was conducted to compare the total structured activities identified as exercises in the low-in-influencer belief and high-in-influencer belief groups. The number of structured activities

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identified as exercise was significantly higher in the low influencer belief group ( $M = 22.05$ ,  $SD = 5.70$ ) than in the high influencer belief group ( $M = 19.50$ ,  $SD = 6.04$ ),  $t(101) = -2.12$ ,  $p = 0.04$ .

The second independent-sample t-test, shown in Figure 2., was conducted to compare the total unstructured activities identified as an exercise in the low and high-influencer belief groups. The number of unstructured exercises selected was significantly higher in the high influencer belief group ( $M = 14.82$ ,  $SD = 6.23$ ) than in the low influencer belief group ( $M = 10.66$ ,  $SD = 5.23$ ),  $t(101) = -3.47$ ,  $p = 0.001$ .

**Figure 1**

*Relationship between structured activities and social media*

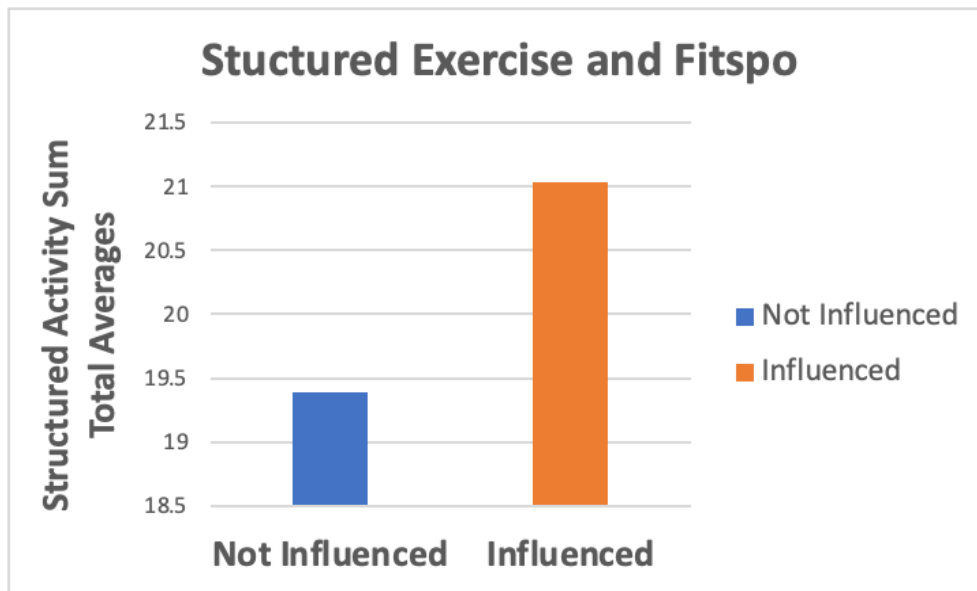
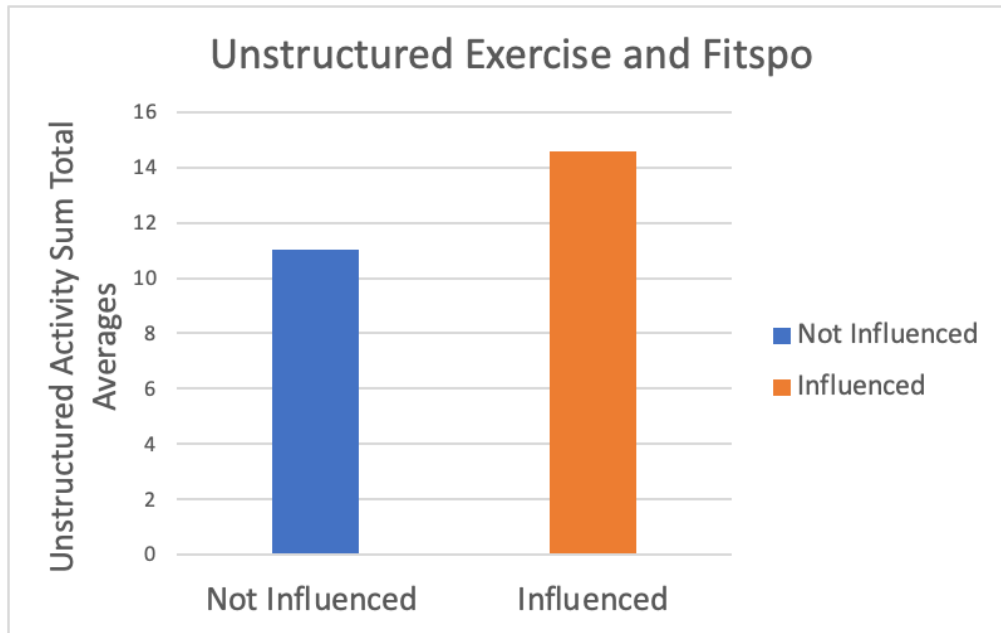


Figure 2

*Relationship between unstructured activities and social media*



Lastly, two separate paired samples t-test was conducted to compare the exercise sum totals and subscale averages. The first paired-sample t-test, shown in Figure 3., was conducted to compare the structured exercise total and unstructured exercise total. The number of exercises identified was significantly higher in the structured exercise category ( $M = 20.43$ ,  $SD = 6.01$ ) than in the unstructured exercise category ( $M = 13.30$ ,  $SD = 6.19$ ),  $t(102) = 9.58$ ,  $p = 0.001$ . The second paired-sample t-test, shown in Figure 4., was conducted to compare the appearance subscale averages and health subscale averages. The averages were significantly lower in the appearance subscale condition ( $M = 4.65$ ,  $SD = 1.34$ ) than in the health subscale condition ( $M = 4.98$ ,  $SD = 1.28$ ),  $t(102) = -2.64$ ,  $p = 0.01$  indicating that participants reported being more motivated by health than appearance.

### **Discussion**

The current study investigated if appearance-related and health-related motivations to exercise impacted the way individuals are oriented toward certain exercises. More specifically, how individuals categorize exercise and the range of those categories. In addition, this study analyzed the relationship between social media and identified exercise activities. Participants were asked to complete a short survey consisting of a couple of questionnaires, motivation subscales, exercise activities (category breadth), and a few questions regarding fitness-related content on social media.

It was hypothesized that higher appearance motivations would correlate with narrower construals of exercise activities. It was also hypothesized that higher health and enjoyment motivations would correlate with broader construals of exercise activities. These results do not support the predicted hypotheses. In this technologically driven world, there is an abundance of fitness-related content on social media. This study investigated the relationship between the abundance of fitness-related on social media and perceptions of exercise. It was hypothesized that participants who were in the high influencer belief group (thought “fitspo” content impacted the way exercise is viewed) would be motivated to exercise for appearance-related reasons (low-level construal) compared to health-related reasons. In contrast to the hypothesis, individuals who think fitness-related content impacts the way they perceive exercise had a broader view of exercise, viewing more unstructured activities as exercise compared to structured activities. However, the relationship between social media and appearance compared to health motivations was insignificant. The relationship between motivations to exercise, how exercise is perceived, and social media is still unclear.

## **Implications**

The relationship between motivations to exercise, construal level, and social media was examined in this study using self-reporting measures to assess motivations to exercise. The Functions of Exercise Scale was used to measure individuals' motivations to exercise (DiBartolo & et al., 2007). Distinct from other research on exercise motivations, lists of exercise activities were used to determine the category breadth of participants' perceptions of what counts as exercise. Unlike the research methods used to determine the impacts of social media on motivations to exercise, CLT was used to understand the relationship between motivations and exercise selection.

The research found no significant impact of motivations to exercise on how individuals categorize exercise and the breadth of those categories. This finding proposes that motivations to exercise did not interfere with how participants identified exercise and did not lead to significant differences between the categories. Although the results did not support the predicted hypothesis, there were still a few strong associations found among the subscales and exercise selections. This finding may suggest that individuals' initial appearance-related motivations could have an influence on their health-related motivations to exercise in the future. In contrast to the hypothesis, the appearance and health subscales were positively correlated suggesting that individuals who are highly motivated by appearance are also highly motivated by health motivations.

We found that appearance-related and health-related motivations to exercise did not relate to individuals' exercise category breadth. The results of this study may suggest that individuals originally motivated to exercise by appearance-related reasons may eventually shift their motivations to more health-based or vice versa. Originally, we thought that people would be

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motivated primarily by only one goal, appearance or health motivations but following this study it was apparent that there is a range of motivations someone may have to exercise. Individuals are not primarily motivated by one of the two motivations used in this study but by multiple categories and subcategories of motivations. There is also the possibility that people may not be as honest with themselves about their motivations to exercise. Another issue is the fitness content on social media. This content may have a different impact on individuals' perceptions of exercise than the researchers assumed. We assumed that individuals with high exposure to the “fitspo” content on social media would be highly motivated by appearance; however, the opposite was found in our results.

Individuals who were highly influenced by “fitspo” content identified more unstructured exercises than individuals who were not as influenced by the “fitspo” content. These individuals rather identified more structured exercises. Different social media platforms display all different types of fitness content and although most of it is being consumed visually by users the impact may not only be “appearance-based.” Most fitness influencers put out content in a gym setting but they also show their viewers recreational exercise activities that they take part in.

### **Study Strengths and Limitations**

This study included multiple strengths. One strength of this study was that the research study was convenient since it was conducted virtually. This made the study highly accessible to participants and it only took approximately 10-15 minutes to complete. Another strength of this study were the materials. Previous research on motivations to exercise and how exercise is perceived usually use straightforward questions asking participants how they feel about cardio or strength training (Prichard & Tiggemann, 2008). Instead, this study did not constrain exercise into two distinct subcategories stemming from structured exercise but multiple categories with

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multiple exercises listed from those categories. Lastly, the participant pool could be considered a strength and limitation of this study. A strength was that there was a variation of participants. Participants consisted of individuals interested in fitness as well as individuals from Amazon Mechanical Turk. This could also be considered a limitation because the answers from the individuals educated in fitness could have created a biased sample depending on how they view exercise.

There were also additional limitations to this research. One major limitation of this study was that it was conducted entirely online. This permitted external variables, that could not be controlled, that may have impacted the results of this study. Since this was conducted as a self-report study participants may have exaggerated their answers. Participants had the risk of being distracted and providing invalid answers or rushing through the survey to receive compensation. After conducting the study motivations to exercise were also reconsidered. Depending on the individual there could be many more motivations to exercise besides appearance-related and health-related reasons.

### **Future Research Directions**

It is important for researchers to continue studying what individuals perceive as exercise because it can help identify the motivations behind exercise behavior. Individuals may start working out to feel better about the way they look. Over time, that initial motivation may change and shift into focusing on the health-related benefits of exercise. This, in turn, can change the way an individual perceives exercise and can shift based on the underlying motivations to exercise.

There are also many other motivations to exercise that were not considered in this study. For example, participants who have played sports in the past or currently may have different



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motivations to exercise such as being a part of a team or even from cultural influence. Age is another factor that could play a role in motivation to exercise because as people get older, they may become motivated to exercise for their health due to the emergence of age-related health conditions. Consumption of “fitspiration” using social media platforms is an important topic to study because in today’s technology-driven society, individuals are easily swayed by social media’s “influencers.” Understanding how this fitness content impacts motivations and perceptions of exercise can help researchers understand exercise behavior. Although there is a belief that motivations to exercise are separated into two distinct categories, appearance or health, there is a potential for diverse motivations that were left out of this study. For example, individuals who are motivated to participate in sports may play for the love of a sport, the feeling of being on a team, or it could be important to their culture. The results of this study also suggest that motivations to exercise may feed off one another and that may orient individuals to multiple physical activities they consider exercise. One general motivation to exercise could lead to multiple subcategories of motivations. There is a lack of research on how exercise is perceived and this study can be the start of more thorough research. We suggest more research be done linking these variables together to better understand the impacts they have on one another.

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**APPENDIX A: Demographic Details**

1. What is your preferred gender identification?

- Male
- Female
- Non-binary/third gender
- Other (Specify):

2. Which category below includes your age?

- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60 or older

3. What is your ethnicity?

- White
- Black or African-American
- American Indian or Alaskan Native
- Asian
- Native Hawaiian or other Pacific islander
- From multiple races
- Other race (please specify):

**Appendix B: Functions of Exercise Scale**

DiBartolo, P. M., Lin, L., Montoya, S., Neal, H., & Shaffer, C. (2007). Are there "healthy" and "unhealthy" reasons for exercise? Examining individual differences in exercise motivations using the function of exercise scale. *Journal of Clinical Sport Psychology*, 1(2), 93-120.

**Directions for participants:** Please indicate the degree to which each reason motivates you to exercise from 1 (*do not agree*) to 7 (*strongly agree*).

**Weight and Appearance Subscale:**

1. I exercise to work off unwanted calories.
2. I exercise because I want to be thin.
3. Exercise helps me control my weight.
4. It makes my clothes fit better.
5. I'm worried I'll gain weight if I stop exercising.
6. I feel like I need to exercise after I eat unhealthy foods.
7. I exercise because I want to look good.
8. I will look better in a bathing suit if I exercise.
9. I feel bad about myself if I don't exercise.

**Health and Enjoyment Subscale:**

1. I like the challenge.
2. I really have fun when I am exercising.
3. I exercise to gain a competitive edge in sports.

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4. I want to be strong and healthy.
5. I exercise to improve my physical stamina.
6. I want to learn a new skill
7. Exercise releases tension

**Scoring:** For each subscale average the responses. Higher scores indicate a higher motivation for the respective exercise motivation



**Appendix C: Exercise Activities/Social Media Questionnaire**

**Part A: Listing Exercise Activities**

*In this part of the survey, you have 60 seconds to list as many exercise activities as you can think of. As soon as you start typing the timer will begin.*

**Part B: Exercise Selection**

*In this part of the survey, you have 30 seconds to select which activities you consider exercise. As soon as you start selecting the activities the timer will begin.*

- |                      |                   |
|----------------------|-------------------|
| 1. Strength Training | 15. Walking       |
| 2. Powerlifting      | 16. Swimming      |
| 3. Boxing            | 17. Surfing       |
| 4. Stair Climber     | 18. Biking        |
| 5. Group Training    | 19. Soccer        |
| 6. Cross-Training    | 20. Basketball    |
| 7. HIIT Workouts     | 21. Hiking        |
| 8. Running           | 22. Rock climbing |
| 9. Jump rope         | 23. Skiing        |
| 10. Pilates          | 24. Skateboarding |
| 11. Cycling          | 25. Snowboarding  |
| 12. Cardio           |                   |
| 13. Martial arts     |                   |
| 14. Baseball         |                   |

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1. Meditating
2. Cleaning the house
3. Moving furniture
4. Taking out the trash
5. Playing with kids
6. Dancing
7. Walking to class
8. Yoga
9. Walking the dog
10. Gardening
11. Mowing the lawn
12. Cooking
13. Grocery shopping
14. Vacuuming
15. Washing dishes
16. Raking leaves
17. Hand-washing car
18. Dusting
19. Sweeping
20. Taking the stairs
21. Shopping
22. Doing the laundry
23. Stretching
24. Shoveling the snow
25. Pacing while on the phone

### **Part C: Fitness/Social Media Questionnaire**

1. How often does fitness content show up on your social media apps daily?
  - 0 times a day
  - 1-2 times a day
  - 3-4 times a day
  - 5-6 times a day
  - >7 times a day
2. How often do scroll through fitness content on social media during the day?
  - 0 times
  - 1 to 2 times

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- 3 to 4 times
  - 5 to 6 times
  - >7 times
3. If you had to guess how many “fitness influencers” do you follow on social media?
- 0-fitness influencers
  - 1-2 fitness influencers
  - 3-4 fitness influencers
  - 5-6 fitness influencers
  - More than 7 fitness influencers
4. Do you think this content and/or these “fitspo” influencers impact the way you view exercise?
- Yes
  - No

**Appendix D: Debriefing Summary**

Thank you for participating in this study!

We are interested in understanding how motivations to exercise impact how exercise is perceived. Specifically, in this study, we are interested in learning about appearance-related and health-related motivations to exercise. We hope to contribute some insight into the scientific literature on these topics so that exercise behavior could be better understood. We understand that many factors go into these types of decisions, and it is valuable for us to hear directly from you and your peers.

As you may remember from the beginning of the survey, we did not collect your name or email as a part of this survey, because it is important to us that we preserve your privacy and confidentiality. If you would like to speak to the faculty sponsor of this study for any reason, we invite you to fill out the contact information form below so that we know how to contact you. As an alternative, you may feel free to reach out to the Principal Investigator, Amanda Falco by email at any time after participating in this study ([Amanda.falco@purchase.edu](mailto:Amanda.falco@purchase.edu)).

If you have questions or concerns regarding the ethics of this study, you may contact the faculty sponsor, Dr. Jessica Carnevale ([Jessica.carnevale@purchase.edu](mailto:Jessica.carnevale@purchase.edu)).

Most importantly, if you are feeling distressed by or uncomfortable about the questions asked in this study, you should fill out the contact information form below and the Principal Investigator will reach out to you within 48 hours to offer support and, if you would like, connect you with professional resources in your community that can help. Alternatively, if you are on campus, you may contact the College Counseling Center directly at 914-251-6930 or [COU.counseling.center@purchase.edu](mailto:COU.counseling.center@purchase.edu).

Name:

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Email:

Phone Number:

Message (optional):

**Appendix E: Course Credit/Extra Credit Compensation**

1. Are you a student from Suny Purchase expecting to receive course credit or extra credit for participating in this survey?

- Yes
- No

If the participant answers “Yes” they will be redirected to a separate Qualtrics survey guaranteeing that their personal information will not be linked to their answers from the study.

1. Name:

2. Which class are you receiving credit for?

- Intro to Psych
- Research Methods II