**Lindsay Sheppard**

**ECN 575: Behavioral Economics**

**A/B Experimental Report**

**Policy Focus**

Obesity is an epidemic experienced by approximately 34% of adults and 15-20% of children and adolescents in the United States alone (Mitchell, Catenacci, Wyatt, & Hill, 2012). The problem is quite complex and fueled by a number of factors including poor dietary choices, cultural traditions, and lack of activity; 80% of Americans do not get the recommended amount of aerobic and muscle building exercise (Oaklander, 2016). A simplified explanation of obesity is that it is the relationship between energy consumed and expended. Therefore, increased activity is one way to mitigate obesity, as well as many of the health issues which may stem from being overweight or obese.

One successful strategy for increasing exercise, proposed by Dr. Mitesh Patel at the University of Pennsylvania, was to use financial loss aversion to motivate people to exercise more (Oaklander, 2016). Other approaches have been to design smarter cafeterias that encourage children to make healthier food choices and increase fruit and vegetable consumption (Thaler & Sunstein, 2009; Gustafson, 2015). In addition, a multitude of tips for exercise beginners have been suggested, such as starting light, using reminders to activate automatic systems, and rewarding oneself after exercise (Robinson, Segal, & Smith, 2019). These suggestions often act as a way to get people started with their fitness journey. However, the current research pondered if behavioral economics could approach the issue in a different way; not only could people be motivated to start moving more, but to incorporate exercise long-term into their daily lives using social nudges.

**Behavioral Economics Concept**

Gustafson (2015) suggested that one way to initiate an exercise habit is to set up times to exercise with friends or family members, as they may motivate one to follow through with pre-commitments. It stands to reason, then, that conformity and herd behavior may motivate individuals to initiate exercise and increase their exercise efforts. Conformity occurs when a “subject” demonstrates the same behavior or attitude as an “object”; the subject is an individual who conforms, while the object is other individuals, groups, companies, policies, rules, or experiences (Song, Ma, Wu, & Li, 2012). Conformity may be irrational, i.e. herd behavior, or rational, i.e. compliance or obedience. Humans are easily nudged by other humans; we experience a strong desire to conform (Thaler & Sunstein, 2009, p. 55). The experiments performed by Asch and Sherif, as well as the unfortunate mass suicides carried out by cults like Jonestown, reinforce that argument. Thaler and Sunstein (2009, p. 66) added that choice architects may shift behavior by simply informing people about what other people are doing. For this reason, the current research design focused on using conformity as a social nudge to increase exercise motivation and effort.

**Research Design**

The hypotheses for the particular research design were as follows:

***H0****: Conformity (specifically, herd behavior) does not positively affect the exercise behavior of individuals.*

***H1****: Conformity (specifically, herd behavior) does positively affect the exercise behavior of individuals*

Specifically, the experiment will attempt to determine if increased efforts by exercise program participants according to social media will increase exercise efforts reported by research participants; research participants may conform to the behavior of the rest of the group. Research participants will be recruited in various ways: social media, colleges and universities, libraries, coffee shops, or other places that one may find a diverse population. The participants will complete surveys that self-report motivation, willingness to exercise, current exercise frequency, and base fitness level. As participants will be enrolled into a research-backed fitness program called The Fit1, the reported base fitness level will ensure the participants are enrolled in a program that is appropriate

1 The Fit is a fictitious program based on a real one; the name has been changed for this report.

for their fitness level.

The Fit offers a 30-day foundational workout for beginners as well as a 30-day intermediate/advanced workout, but the programs are essentially the same aside from the foundational workout’s simpler modifications. The program videos are littered with motivational memes and a fitness coach who incorporates memorable motivational quotes (e.g. “Every winner was once a beginner”) and support during each workout. The videos are accessible directly on YouTube as well as in printable, downloadable calendar formats with clickable links to each video, and an app that allows participants to view the videos and track their workouts easily; participants can choose their preferred method of video access without hindrance.

Once placed in either the foundational or intermediate/advanced programs, participants will be split into two conditions, Condition A and Condition B, using interval-based, systematic random sampling. The Fit is active on social media on all platforms; for the current research, Facebook will be the main method utilized. As some participants may be unfamiliar with Facebook, potentially affecting results, those without Facebook pages will be able to set one up and taught how to use the platform prior to the study. Unknowingly, each condition will be enrolled in different versions of The Fit’s group Facebook page; Condition A participants will join The Fit’s group A page, which is a content-filtered page that prominently displays postings from other active members who frequently go above and beyond the program in which they are enrolled (i.e., members who are completing more than one program, involved in extra fitness challenges, posting body transformations by pictures or videos, and skipping rest days). Extra effort from members will be highlighted. Condition B participants will receive the “toned-down” B version of The Fit’s group page; that is, those who are completing the programs exactly as prescribed and/or few to no posts showing altered rest days, extra challenges, or dual program enrollments, for example. Participants are free to comment on or simply spectate on their respective pages as desired. The pages will be filtered using the Python programming language and natural language processing techniques.

Participants will complete 30 days in their respective programs and conditions, marking each completed work-out on either the calendar or the app. Results at the end of the 30-days will be calculated using an unpaired t-test to compare mean number of completed exercise hours, and post-completion surveys will be gathered to compare the participant’s initial survey responses to their current feelings.

**References**

Gustafson, C. (2015, January 7). Health, obesity, and behavioral economics. *Cornhusker Economics.* Retrieved from https://agecon.unl.edu/cornhusker-economics/2015/health-obesity-and behavioral-economics

Mitchell, N., Catenacci, V., Wyatt, H.R, & Hill, J.O. (2011, December). Obesity: Overview of an epidemic. *Psychiatr Clin North Am. 34(*4): 717-732*.* doi: 10.1016/j.psc.2011.08.005.

Oaklander, M. (2016, February 17). This is the best way to get people to exercise. *TIME*. Retrieved from https://time.com/4226640/exercise-workout-fitness-incentives/

Robinson, L., Segal, J., & Smith, M. (2019, June). How to start exercising and stick to it. *HelpGuide.* Retrieved from https://www.helpguide.org/articles/healthy-living/how-to-start-exercising-and stick-to-it.htm

Song, G., Ma, Q., Wu, F., & Li, L. (2012, August). The psychological explanation of conformity. *Social Behavior and Personality: An International Journal. 40(*8). doi: 10.2224/sbp.2012.40.8.1365.

Thaler, R.H., & Sunstein, C.R. (2009). *Nudge: Improving decisions about health, wealth, and happiness.* New York, NY: The Penguin Group (USA) Inc.