

# Social Comparisons in Social Exercise Apps

Poster

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## ABSTRACT

A key strategy to combat sedentary lifestyle is to encourage fitness exercises. Traditional wellness and lifestyle management programs focus on inducing health awareness and providing fitness activity support. The growing pervasive use of smartphones allows individualized and cost-effective digital wellness programs to be administrated through mobile fitness apps. Drawing on the social comparison theory, this study plans to explore ways to effectively design social comparison mechanisms to help promote physical exercises. Additionally, this study proposes a unique field experiment that enables fine-grained manipulation of social comparisons and present an opportunity to observe network evolutions over time.

## Keywords

Social comparison, social fitness, network evolutions.

## INTRODUCTION

The growing availability of mobile health technologies and skyrocketing popularity of online social networks have given rise to social fitness apps as a cost-effective way to promote regular physical activity. In this study, we draw on social comparison theory (Festinger 1954) as the key theoretical framework to guide our investigation of longitudinal usage of social fitness app. This theory posits that individuals determine their personal worth by evaluating their own standing against that of others in various aspects, such as social status, competence, and achievement (Wood 1996). By comparing themselves to better others, individuals can often be motivated to improve to draw equal with others. Yet in some occasions, through comparing with superior others, individuals might feel dejected by their inferiority. Correspondingly, the objective of this study is to examine the effects of social comparisons on individuals' social fitness app usage.

## PROPOSED METHODOLOGY

To examine the effects of social comparisons on social fitness app usage and network evolution, we plan to conduct a field study using an experimental social fitness app over a 5-month period. Subjects will be recruited to take part in a study that evaluates a mobile fitness app.

They will be informed that app features will be made available progressively. Subjects will be randomly assigned to one of the nine experiment conditions, which will be manipulated in the experimental app.

In week 1 to 3, subjects will be encouraged to use the app to track their exercise activities (e.g., running, jogging, walking, cycling) as much as possible. They will be told that this is a private usage period and hence their tracked activities will remain private to them during this period.

At the beginning of week 4, for subjects assigned to the following condition, each will be enrolled into a "club", in which he/she will find 10 other users. Subjects will be told to follow a minimum of two users in the club. At the end of week 4, the following exercise will be concluded. Subjects' followings will be maintained in the next phase. Additionally, 10 additional confederates will be introduced to each subject's club, making a total of 20 confederates in each club. For subjects assigned to the follower condition, five of these additional confederates will in turn follow the subject.

In week 5 to 8, for subjects assigned to following condition, they will begin to see exercise activities posted by confederates who subjects are following. For those assigned to the follower condition, subjects can navigate to their follower list to view each follower's exercise activities. Confederates' exercise intensity (i.e., frequency, duration, distance, and speed) is computed based on the subject's previous 4 weeks of exercise intensity.

At the beginning of week 9, subjects' clubs will be dissolved and be enrolled into a global "club", which consists of all subjects and confederates being followed. They will be allowed to follow any others in the global club and unfollow whoever they desire. Subjects will also be allowed to forbid others from following them.

The entire study will conclude at the end of week 20.

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