

# Systematic Observation of Mask Adherence and Social Distancing in a Northern Virginia Fitness Center

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## Abstract

SARS-CoV-2 is now one of the deadliest pandemics in history, with approximately 2.46 million deaths worldwide as of February 22nd, 2021<sup>2</sup>. In the United States mitigation and prevention guidelines and restrictions related to COVID-19 are set by local and state governments. The state of Virginia had a stay-at-home order between the hours of 12:00am and 5:00am with some exceptions; all public and private gathering be limited to 10 people; and wearing a face covering indoors and outdoors is required except when an individual is exercising or using exercise<sup>7</sup>. Executive Order 72 has been amended four times, with the last update being on March 23, 2021. Individual businesses and areas can also require mask wearing and social distancing based on preference of the owner, even if the law does not require. The Onelife Fitness gyms in Northern Virginia and Maryland require masks to be worn at all times while exercising in the gym, whereas others highly recommend mask wearing but members are not required to keep them on during exercise. The Systematic Observation of Mask Adherence and Distancing, or SOMAD, was launched by the Kaiser Permanente and the RAND Corporation to better understand adherence to mask-wearing and physical distancing behaviors. The GW SOMAD team is collecting observational data in the D.C. region, including at the Onelife fitness gym. Observational data over a four-month period is recorded at the same time once during the week and once on the weekend.

## Introduction

To help stop the spread of COVID-19 all age groups need to be compliant with mask wearing and social distancing. From history we can see that perceived susceptibility for many health risks may be varied on many factors such as age, race, location, and knowledge. An example we can learn from is the 2009 H1N1 Pandemic or the Swine Flu Pandemic. In an article titled “Why do I need it? I am not at risk! Public perceptions toward the pandemic (H1N1) 2009 vaccine” by Seale et al. we can see that there are multiple factors that sway people’s decisions to adhere to public health measures and/or receive the vaccine<sup>8</sup>.

When it comes to COVID-19 some people have become complacent and have less panic/fear as they in the beginning of the pandemic in March of 2020. If we can see who, when, and where people are being most complacent and relaxed about guidelines and regulations, we can help crackdown and prevent the spread.



## Objectives

- The principal health objective of this study is to monitor face mask adherence and distancing by gender, age, race/ethnicity, physical activity level, and location to help slow the spread of COVID-19 in local communities.
- The behavioral objective of the study is adherence to proper mask wearing and complete social distancing.



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## Materials and Methods

Observers record the current mask guidelines, the date, time, location, and if 6-foot social distancing can be achieved . Observers report to the site twice a week, once on a weekday and once on the weekend at the same time. There are two distinct types of settings in which observations can take place, either established locations or target area where people spend time (parks or playground with multiple locations) or a pathway/sidewalk with one point where people will pass by.

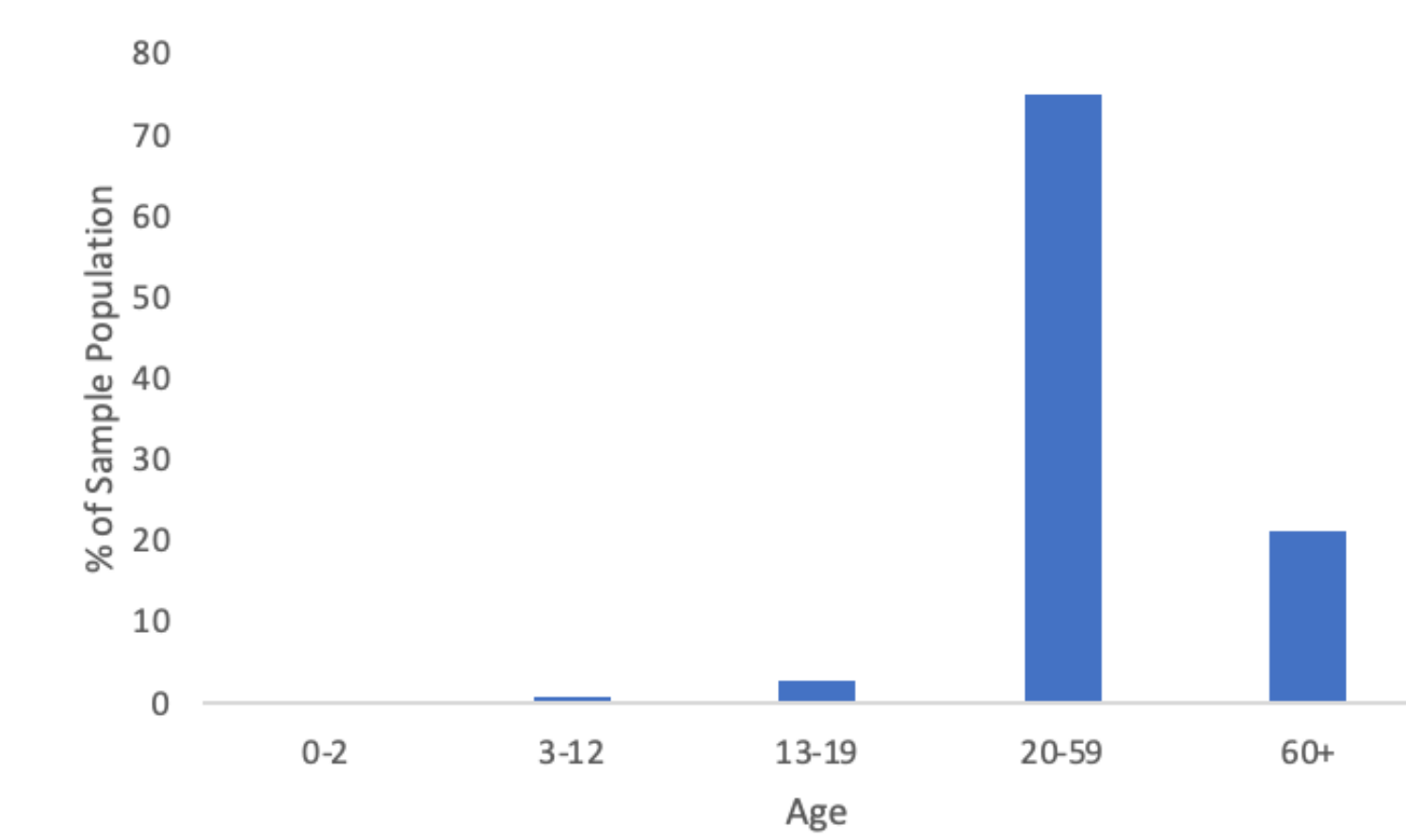
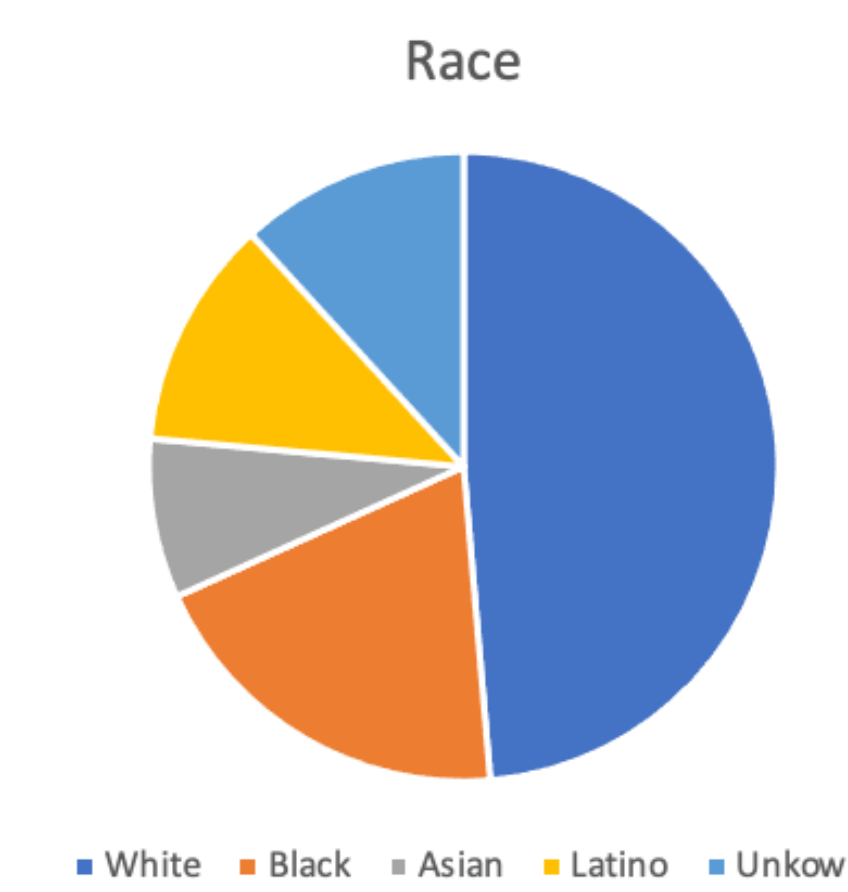
- In the target area observations, the observer will make defined boundaries and will scan from left to right and enter all information about a subject before moving to the next, the observer will go to each of the defined locations once per episode of recording and monitoring (ex. Slides, swings, and pavilion at a park will be recorded only once Tuesday morning, and then repeated for the same locations on the weekend).
- For the path/sidewalk location the observer will be stationary and only record when people pass by. It is recommended by the Kaiser to only enter information for up to four people at once to get the most accurate information in a busy area. It is also important to note that we are recording the behaviors of and individual as soon as we see them even if the change their behavior right after.

All data was entered and captured using the National Study of Mask Adherence and Distancing google form, the form has spots to enter data on 30 people at a time.

## Results and Discussion

From the data that has been collected so far 46.7% of gym goers wore a mask fully while working out , 4.8% wore the mask partially, 0.1% had the mask visible but not on, and 47.5% did not wear a mask at all when working out. When looking at the results of social distancing of 6ft in the gym 62.7% of the time people had a 6ft distance between them while 37.2% did not maintain social distancing. In the gym there was a low number of groups recorded, 80.3% of people were alone, 15.4% of people were with 1 other person (2 in total), 4.2% were in a group of 3-5 people, and 0% were in a group of 4-9 or 10+ people. Of the population at the gym majority were male at 66% and females being 33%. The level of physical activity was also variable, 23% were sedentary or at low activity, 65% were at moderate physical activity and 11% were at vigorous activity levels.

Since this data collection is on a mobile device and can be fast pace it is prone to human error. When recording data, the wrong box can be checked or may be missed. The google sheet that is used to submit does not alert if you have empty boxes when submitting.



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