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Posture: Design Research Plan

### **Participant Sample and Key Stakeholders**

Posture improvement is applicable to everyone with the ability to understand and control their bodies. Therefore, our research methods can involve a potentially wide group of people. People born in the last few decades do substantially more desk and computer work than people of previous generations, and young people (e.g. college students, young professionals) stand to gain the most from education about proper posture. People who do a lot of desk work, in particular people who look at desktop/laptop screens, are especially vulnerable to improper posture. We therefore propose to observe people sitting at doing "screen time". We would need to gain the permission of a common office space, such as the CoMotion lab in Startup Hall. Key stakeholders in our design include health-conscious people, those with back pain, and people who engage in lots of screen time as part of their daily routine. Secondary stakeholders include chiropractors, personal trainers, employers and classroom instructors.

#### **Research Methods and Procedure**

We plan on conducting "fly on the wall" observations and using experience sampling as our primary research methods. For the observations we will watch and take notes on posture, especially as it relates to the following behaviors: stretching, shifting positions, concentration, and socialization. Other things we will note is location, time, any other activities taking place (i.e. eating, texting, talking), approximate age/gender, and duration of activity. For our fly-on-the-wall observation, we will not interact with our subjects, as we do not want our observations to alter how they would act and posture themselves normally.

For more detailed information and insights on posture throughout the day, we will conduct experience sampling. Experience sampling will be conducted via text messages interspersed throughout the day over the course of 2 days. Each sample will contain 3-4 questions about their current activity, posture, and mood. We aim to study at least four participants. We will use this data to learn about potential relationships between improved posture and improved physical or mental well-being.

#### **Detailed Methods**

## Fly-on-the-Wall Observation

Each researcher will go to a specific location and select a place to observe that is discreet as to not disturb the people they are observing. We have selected four locations, Northgate Mall, Odegaard Library, Mary Gates Hall Lobby, and the Husky Union Building. We feel will give us a wide variety of different people, activities, and behaviors. The duration of each observation will last at least an hour, and we plan to record video and still images of people to analyze their posture.

# **Experience Sampling**

Participants will first be instructed on how to understand proper posture when standing and sitting, particularly how to evaluate their own quality of posture. They will share their preferred mobile phone number and consent to 4 text messages per day at random intervals between the hours of 9 and 5 pm (roughly: morning, lunch, afternoon, and evening). Each text will ask them to reply to five questions: (1) the current quality of their posture on a 3-point or 4-point Likert scale (e.g. Bad, Neutral, Good); (2) their current activity (sitting or standing, specific activities); (3) the current quality of their mood on a 3-point Likert scale (Bad, Neutral, Good); (4) an estimate of how many people they are currently surrounded by (e.g. sitting at their table); and (5) where they currently are. We hope that such a small participant burden in each sample will give us a high response rate.