Applying Principles of Behavior Change Therapy to Habit Building Websites

Introduction:

At the beginning of each and every year, most people will have a list of resolutions for the upcoming year. With every intention of changing, however, most people have fallen off the wagon by the end of January or February. Changing our own behavior can be hard, but technology should be able to help. Taking a look at the number of self-help apps and websites is proof of this.

Many websites today try to help people build certain behavior changes into their lives. Some of them help you work out more frequently and others help you learn languages. Very few of them, however, actually apply principles of behavior change therapy to make the transition from new behavior to habit easier. There also exist few websites that allow for the user to evaluate their change and to receive feedback on that change.

As I am taking a class on the principles of behavior change therapy and one aspect of the class is a course-long project where we develop and implement a behavior change program that alters the behavior of one of our friends, I realized that there currently do not exist many websites that allow for this tracking and testing of behavior change therapies. As such, I am interested in creating such a platform, that allows users to not only track their own behavior but helps them change their behavior and graphs their progress over time.

Objectives

1. Create a website that helps people build habits using principles of behavior change therapy such as social norming and positive reinforcement

2. Allow users to follow their friends to see how their friends are doing and to help support them in their behavior change quest

3. Test the effectiveness of the website by using a multiple baseline design that utilizes subgoal setting to effectively build behavior
Methodology and Limitations

Testing whether or not the website actually helped build a habit will be one of the harder aspects of creating this format. To achieve said goal, I propose that a multiple baseline design format be used where we track baseline behavior for multiple people (the same behavior across two people) or two different baseline behaviors for the same person. We can then apply the aspects of the website that will help build the behavior change (subgoal setting in phases, positive reinforcement and social norming) and see whether or not the incidence of the behavior change mirrors the timeline for the application of the experimental phase of the therapy. If the behavior change occurs with little latency after the experimental phase begins and the change is clear (different slope or mean), then it will be significantly easier to attribute the behavior change to the website.

Of course proving the efficacy of this website will only be part of the project. As many of these websites already exist, lift.do is just one example, the real question will lie in whether or not this new website will offer a particular advantage in efficacy with regards to other websites of its kind. My hypothesis is that it will as many of their websites only apply certain aspects of behavior change therapy but nothing as holistic or cohesive as the proposed project.

One important aspect of my website in comparison with others is that the behavior being changed will also be tracked using graphs and the different subphases will have distinct goals as well. Currently, most behavior change websites are focused more around the binary of whether or not an action was performed or not, but they do little to track the actual behavior in a discrete way (rather than the number of steps they took or the distance they ran or the amount of time they were working out, it’s just whether or not they went to the gym). Over time then, much of that data becomes lost and the only focus of the entire project ends up being the consistency of the behavior. While building the consistency of the behavior is important, giving feedback on a behavior and seeing their progress over time also serves as positive reinforcement for the behavior. Moreover, reinforcing their achievement of the goal also builds the likelihood that the behavior occurs. Tracking the behavior then becomes integral to building new habits.

My senior project will therefore also include an initial test to the effectiveness of my website with the websites that already exist. I will code two different websites, one that applies these principles as previously stated and one that does not, and I will have two of my friends randomly assigned to use one website vs. the other. Afterwards, we can track which person made more progress towards their goal, who stayed with the website for a longer period of time, whether or not that behavior became easier as the project continued, etc. With so few participants and a non-random sample, such an unscientific test will provide no statistical significance, but hopefully it will serve at least as a proof of concept for the idea.
Another important limitation of my senior project is that we will initially be limiting what kinds of goal behaviors can be achieved. While the dream would be to one day allow user input to set any kind of behavior change and their own sub goals, we will narrow the focus for proposed behaviors to make the coding of the website easier. More than anything, we want a demonstration that such a website may actually help in building behaviors, and regardless of the limitations that may or may not be initially set, the website should still serve as a proof of concept.

List of the deliverables

1. A working website that allows users to track their behavior that applies all of the psychological principles previously discussed

2. A full report detailing the data and analysis of our website vs. a “control” website that will also be created