Team D.I.E.T - Tommy McHugh, Dhairya Mistry, Fouad Khan, and Akram Khan P.2 Interviews & Observations

# Target User Population

We are designing a product for parents who work and have children and, thus, have sometimes neglected their health for other priorities. These parents are from many different backgrounds and will work at least part-time and will self-report not living a completely healthy lifestyle everyday. This could include not exercising enough, not eating healthy foods, or having another self-identifiable characteristic that they feel could be improved upon to live a healthier life. In some form or fashion, though, our users will have sacrificed part of their health for something else going on in their life. Most of these parents must help provide for their family or contribute in other ways that make their lifestyle busy and complicated to get in exercise or to address concerns about healthy eating habits. Typical ages for these individuals can be anywhere from 40 to 60 years old. Users will have basic knowledge of how to use a smartphone or computer but will most likely not be experts. Some of these parents may have tried previous applications to help improve their health, but, for some reason, they have stopped using these applications or use them infrequently.

#### Interview Notes

Representative User #1

For our first representative user, we interviewed and observed a white male who is fortythree years old. He works as an investor but is self-employed. Therefore, most of the time, he accomplishes his daily work at home in his office. He is married and has one eight-year-old son. For physical activity, he prefers to workout in a gym doing weight lifting. He does not frequently use any aerobic conditioning machines or go out for runs, swims or bike rides. In fact, he does not enjoy those activities and prefers weight lifting because he feels that it helps him stay in fine health while doing fun physical activities. He feels that his health is on the better side, although, he expressed his concern for gaining some weight after his son was born. While he is not overly worried about this weight gain, he had recently worked to exercise more to lower his weight. Our representative user is a good person to interview and observe because he is actively working to improve his weight through intense exercise and weight lifting. While many people focus on just the eating part of losing weight, this subject expressed that he feels his eating is healthy, and he uses the Weight Watchers app to count calories. Interestingly, the weight gain he observed was during his use of this app. When asked about this, he expressed to us his disdain for the app but reflected that he uses it more to stay in a good habit he has developed than to actually keep his eating in check.

We observed this representative user go through an entire workout session at his local gym. This task was chosen because it provided a look at a supplementary form of health management that may contribute to our solution. While our focus is on eating habits, physical activity can change eating habits and influence how a person chooses the foods he or she eats. By observing exercise and the thoughts of a person surrounding his or her health and nutrition during exercise, there may be insightful information to gain regarding designing a proper solution to our problem.

Our subject began his workout routines by taking a pre-workout supplement drink. This drink, he informed us, was used to help him feel better during his workout routine and to make

his workout have a greater physiological impact. He explained that he never does a workout without taking this drink, as it makes him feel energized and ready to workout. In fact, we observed that, about fifteen minutes after ingesting the drink, he seemed to be more energetic in his exercises and explanations.

Our subject uses a spreadsheet that he receives from a private coach to determine the order and number of exercises to do. This stood out to us because it showed that our subject cares enough about improving his health that he has hired a private coach. After asking him about the relationship with his private coach, our subject explained that hiring his coach was not too expensive, and he felt that it made his workouts meaningful. Without a coach, our subject felt that going to gym sometimes felt like a waste of time because he was not an expert in what exercises to do. Along with this information, he explained that his coach had told him to consume a pre-workout supplement drink.

During the workout, our representative user seemed to separate his workout into three sections: a stretching/warm up section, the main workout, and a cooldown. Both the warmup and cooldown section were very relaxed and actually took the most time out of the entire workout. Our subject explained to us that this time helped him both mentally and physically and that he likes to slowly get into the workout because the main part of the workout is quite intense, and there is very little rest. This was quite clear to us as we observed our representative user become very serious and focused on his exercises during the main workout. During this part of the workout, our user went from one exercise straight to the other. At most, our subject took thirty seconds of rest. Along with this intensity, our subject also used headphones and his iPhone's music app to play music during this section. After the workout had concluded, he commented to us that he likes to play music during this time because he feels music helps him relax, focus, and

work harder during the main part of the workout. Other than using music and his spreadsheet, our user did not use his phone very often. In fact, he explained to us that he purposely tries to avoid his phone during exercise because it can distract him from the work at hand.

Finally, our subject finished off his workout with a cooldown that consisted of rope stretching and foam rolling for approximately fifteen minutes. During this period, he not only stretched and cooled down, but he also grabbed a protein bar and recovery drink mix from his bag. Along with his pre-workout supplement, our subject takes a post-workout bar and drink after every workout. He feels that this helps him recover for his next section. During this period, our subject was much more relaxed and talkative. He began to explain to us that he has been working out since around the time his son was born. This time helps him relax and destress after working and managing his son's life, so he enjoys it immensely, even though at times it can be quite challenging. He informed us that, although he has felt stronger, he has had a hard time managing his weight, which is why in the past three months he had hired his private coach. He seemed optimistic that his coach will help him manage his weight better with exercises that are useful.

#### Representative User #2

Our second representative user was a white female who is forty-eight years old. In her free time, she enjoys reading new books and spending time with her son who is currently in middle school. This representative user works as a journalist at a local news company. She has been married for eighteen years and has been working as a journalist for over twenty-five years. While she feels her job is very important to her, she works normal hours and says that she enjoys her job, and it is not incredibly stressful. When reflecting on her health, she says that she does not think about her health that often and is somewhat worried when it comes to her yearly check

up as her doctor usually tells her that she needs to improve her health by either eating better or engaging in some form of physical activity. Along with this, she informed us that she does not have a routine to be physically active because she does not enjoy exercise. This subject is a great representative user for our problem because she is concerned about her health but seems to be lost about and unengaged with traditional methods to improve her current eating habits and health. Therefore, a mobile application that encourages behavior change may help this user with her current predicament.

The task that we observed this user accomplish was buying her weekly groceries. We observed her completing this task because many eating habits are formed because of the foods that are inside a person's house. Getting an in-depth observation of grocery shopping will help us determine what solutions could be created to improve eating habits even before a user begins eating.

At first, our subject entered the grocery store and informed us that she uses a list on her phone's Notes application to know what groceries she needs to buy. When asked whether this list was dynamic depending on needs or relatively static, she explained that, while sometimes she does change the list, almost always there are key items that stay on the list that she always gets. Only special items for special dinners will be written on the grocery list. During the explanation of the list, and her process of grocery shopping, the subject seemed very content with her process. She never complained or acknowledged any problems with this. In fact, when asked what parts of this experience were not smooth or easy to use, she could think of none and stated that she was very content with this experience.

Once she began searching for groceries, our subject seemed to rush through the searching process, going to each aisle and grabbing the first kind of product she saw on her grocery list.

When asked whether she had a preference for certain brands over prices, she stated that she did not seem to worry about either. In fact, she explained, getting grocery shopping done as quickly as possible was the much bigger priority to her than finding a specific brand or getting the best price on her groceries.

Occasionally, when she saw certain products, such as a brand of chips she clearly enjoyed, she visibly looked interested and would spend time looking and eventually grabbing that product. These products, she told us, were just things she had not had in awhile that she had previously enjoyed and wanted to grab for later. There were only five products that she selected that were not on her grocery list. Most of these were either candies or snack products. This seemed particularly interesting and noteworthy because almost all of these products were not healthy. While most of the products listed on her grocery list were standard cooking ingredients that included a range of healthy meats, fruits, vegetables, and grains, this was not the case with products bought that were not included on the list. Our subject seemed to see these products and then feel the urge to indulge by buying them, while not acknowledging them by not including these products on her grocery list.

During the process of grocery shopping, our subject also did not seem to have a normal pattern for getting groceries efficiently, as she just went up and down every aisle until she had gone through the entire store. She informed us that, while she knows this is not a very efficient manner, it allows her to see what is in the store and if there are any new products. We noted that her rushed sense of grabbing the first product she saw was somewhat of a contradiction to her pattern of going through the store one aisle at a time; however, she replied that looking for new products or foods was more interesting than the mundane items on her list, so, while she did not enjoy the mundane part of grocery shopping, she did enjoy looking at new available categories of

products that the store had added. Once our subject had concluded her grocery shopping, she departed the store and loaded her products into her car. As she finished loading these products, she seemed to have a guilty look as she grabbed a candy bar she had bought and proceeded to eat part of it. She informed us that she does like to reward herself with a treat for doing some of the mundane work she must do like grocery shopping.

# Representative User #3

The individual being interviewed and observed is a white female who is fifty-one years old. She is a stay-at-home mother of two children, one boy who is a middle school student and one older college-age student. Her husband travels a lot, so she must take care of her children. Her parenting duties include cleaning up the house, doing laundry, making meals, and engaging in any other help her children need. During the day, she often goes to yoga multiple times per week. Occasionally, she will join her friends for a spinning class but she rarely goes more than once a month. While she is content with her health, she feels that she is not in the same shape she used to be in and is always trying to get back to that form. Most of her physical activity, she feels, comes from walking while accomplishing tasks she must do as a mother. This mother is a good representative user because she makes a lot of decisions about healthy choices not just in her life but in her children's lives, too. Along with this, because she does not have an occupation and is cognizant about her health, some factor other than just long working hours is preventing her from achieving the health she desires. The feedback that we received from her will help our team look at factors other than jobs that prevent people from living a healthy lifestyle and making good eating habits that they would like to have.

During our interview of this representative user, we chose to observe her making a dinner meal for herself and for her children. This process included choosing a menu, making the meal,

and eating the meal. We wanted to observe this task because eating habits are created when people are eating, so this observation will give us insights into potential solutions and design decisions that would affect the creation of poor eating habits while making and eating meals.

Initially, our interviewee was not sure what she was going to serve for herself and her children that night. Her husband would not be home for dinner that night because of a business trip, so it would just be her son joining her for dinner. After thinking for a short while, she let us know that she did not have many ideas, so she sent a text message to her younger son asking what he would like for dinner. When asked if she does this frequently, she responded that many times she would just go off her younger son's preferences unless they were going to a restaurant to eat. She liked asking her younger son because he is more picky. She informed us that they ate out or ordered in food sometimes as often as three or four times a week, so she did not cook often. We found this significant, as, by not knowing specific nutrition information about the food she was ordering, she might be making unhealthy choices without realizing the actual nutrition of the food.

Within the next hour, her son responded that he was just fine with pasta and meatballs. She informed us that this was a normal request from her son, so, many times when she was cooking foods, she would prepare this meal. Because the meal seemed easy to make for her, she seemed joyful that she would be making this meal. After writing down a list of ingredients she needed, we drove to the grocery store. The grocery store we went to, a Jewel Osco, was about a four-minute drive. When asked if she always drove to the store, she replied nine times out of ten she would because she did not want to carry groceries back, although she sometimes feels guilty about not walking. When we walked into the store, our subject quickly found all the ingredients she was looking for. She did not wander to other areas and was asked if she usually adds stuff to

her shopping cart that is not on her list. She replied that usually she does not because there are other times she goes to the grocery store to get general groceries. The ingredients for the pasta were standard ingredients from a recipe list she had at her house. She was unsure about where the recipe came from but has had it for many years. After checking out and returning to her home, the time was starting to get late, so she began to make the meatballs and sauce for the pasta. Many of the ingredients were not canned but fresh from the store. When asked whether she likes to use fresh ingredients over canned, pre-made, ingredients, she responded that she did not mind canned ingredients, but this recipe calls for fresh items, so she likes to stick to those ingredients and not deviate from the recipe. Health was not a large concern to her in terms of the ingredients, but, because her son liked the recipe, she used it. Shortly after beginning to make the meal, her son returned from school. While managing her younger son until dinner time, our subject seemed to become more anxious and stressed about the meal, as her younger son kept asking for her attention. After about fifteen minutes of talking, she asked her younger son to go play for a few minutes outside the kitchen until dinner was ready. When asked about this decision, she replied that she was worried she would mess up cooking the dinner.

Once dinner was finished cooking, she began to prepare plates and servings for both her sons. Along with the pasta, she prepared a salad and a roll of bread for each son. She informed us that she likes making the salad for her sons and that it was for their health more so than her own. She did not serve herself until after both boys were served and had begun eating. The reasoning behind this, she explained, was that she likes to clean up things and make sure they are happy before dealing with her own dinner. Afterwards, she quickly seemed to eat her food to catch up with her children. She did not seemed very concerned with how large a portion she got; instead, she seemed to care far more about her children's portions and dinner. Later on, she expressed

that during dinner it was hard for her to manage her own health because she was so worried about her boys. However, during other meals, she believes she is much more aware of her health and eating habits because she only has to worry about herself. Finally, after eating, she was finished managing both her children and making dinner and could relax.

## Representative User #4

In this interaction, the individual being interviewed and observed is male, white, and fifty-six. He currently is an athletic director and a coach at a kindergarten through twelfth grade school and will many times need to work weekends and late nights to fulfill his job duties. For physical activity, he enjoyed running and has run numerous marathons in his youth, but he has a calf injury that has prevented him from running frequently for the past decade. Currently, most of the physical activity he tries to do is either walking or biking. He has two sons who are both adults. This individual is a good representative user to interview and observe because, while he admits he does not live a very healthy lifestyle, he is actively trying to find ways to change that. His job is quite strenuous because of the long hours he must work, so he does not have a lot of time to focus on living healthily, but he still tries to eat at home when possible. He will be quite beneficial in looking at how to help users with long working hours to use the short amount of time they have to improve their health. Along with this, he has tried a number of different health apps such as MyFitnessPal and Weight Watchers to lose weight but has stopped using these because of complaints about them. This feedback will help us find where pain points in existing solutions may be. Finally, his demographics fit the demographics of our target user population perfectly.

We observed this individual using the MyFitnessPal app. Particularly, we focused on the representative task of a user who wants to record the nutrition information about the food he ate for lunch. This task was identified because this individual has previous experiences with food tracking software, in particular MyFitnessPal, but he has stopped using these products, so it provides an excellent opportunity to look at flaws in this popularly referenced existing solution.

Upon installing the application, the individual already had an account with MyFitnessPal, so he was able to successfully log in without any problems. The process was fast and efficient, and the user seemed pleased to remember his password. Interestingly, the user did not want to use the Facebook login button, even though it might have been faster. He felt that the privacy of his health information should not be connected to his Facebook account. Immediately after the user logged in, the app began to take our user through a dialogue to record the last meal he ate. He wanted to record the ham and cheese sandwich he had just eaten along with yogurt, granola, and blueberries. Along with this, he had drunk 500ml of water. Initially, the user searched for "ham and cheese sandwich," but, when multiple results from different clearly premade brands appeared, he seemed frustrated. When asked what the matter was, the user expressed that he was not sure what the proper item was because there were multiple ham and cheese sandwiches with different calories, and he was unsure of which calorie number was correct. After scrolling for a short period, the user went back to the top and selected the first option. He expressed that, if he was unsure of what the calorie number was, he would just choose the first option.

After recording the first part of his meal, the user wanted to record his yogurt, granola and blueberry bowl. Initially, the user went through the same process of choosing the first choice yogurt the list provided. However, because the box of granola was still next to him, he decided to try the barcode feature for his granola. The feature was quick and came up with the exact result

he was looking for, and the user was clearly surprised and pleased with the application. When asked why he seemed pleased, the user felt that usually a barcode scanner would not have a very large database, and, since his granola was not mainstream, he was pleasantly surprised it was included. He believed that, the last time he tried to scan in his granola, the app did not recognize it. While it may have not been added, we suspect that the user may have had a false assumption about whether or not the barcode scanner would work to record his food.

Finally, the user finished off inputting the rest of his items the same way he did the ham and cheese sandwich and yogurt. After finishing off the task, the user stated that he was surprised that it seemed the calories used were off and that he had actually eaten more than the app believed. He began to tell me how that problem had plagued him since he started using the app. Because he did not have 100% certainty about whether what was being recorded was accurate, he felt that the app was not helping, especially when he was not seeing progress. Afterwards, I asked the user to reflect on the experience he had just had with this app. He expressed his enjoyment again that the barcode scanner worked, but he stated again his uncertainty about the accuracy of the app. Along with this, he reflected that it took him much longer than he would spend sometimes eating lunch to record this information. Therefore, many times he would not have the time to use the app, although he stated this could be because he was not very familiar with the user interface. When asked whether the user interface was easy to learn, he responded that most things were easy to figure out, but he was sometimes slow to learning new apps, and the app had updated with a new design since the last time he had used it. Overall, he felt he was unsure of the impact MyFitnessPal could have on his health, so, while he enjoyed seeing his granola in the barcode area, he still found the app annoying and a hassle to use.

## General Reflection and Observations

During the opportunities we had to look at health-related activities in connection with our problem, the biggest takeaway we found is that people do not seem to enjoy spending a large amount of time worrying about or working to fix their health-related problems. Time seems to be the biggest factor, as people seemed to be more than willing to spend money or other resources, but, when it came to sitting down and figuring out methods to solve their issues, they seemed to try to avoid these issues. This was surprising to us, as we would have thought monetary means would be the greatest impact on how much someone is able to control his or her health, but in reality the amount of time people spent working to be healthy seemed to determine how healthy they actually were, instead of how much they spent on products to be more healthy.

Because of the limited time our representative users seemed to spend on improving their health, we realized that our users need solutions that are fast and nonintrusive. Intrusive measures that take away from children, family, or work seem to annoy the users and make them rebel and not follow solutions. For example, grocery shopping or using a calorie counting app were tasks the users did not feel were not fun, and they felt intrusive. They wanted to get them over as quickly as possible. Our users need fun ways to improve their health that are quick to achieve or are stimulating to the user. This provides a lot of opportunities for innovation, as current methods for improving eating habits are intrusive and not entertaining to the user. These current experiences are huge pain points for the users, as they prevent them from engaging with a solution because of the intrusive nature of current health products.

During physical exercise, our representative users seem to engage more and feel actual progress, especially when guided by experts or informed opinions. In this sense, our users need to be guided to improve their health. When their own opinions and assumptions take over, they

feel unsure of themselves and are unlikely to continue using that solution. This is the case with calorie counters as well, as, when users do not feel the data they are inputting is accurate, they lose faith in the solution and abandon it. In our solution, we must provide a reassuring sense of control to the users, or else they will feel lost and will abandon our product.

Finally, one surprising theme that kept recurring in all of our interviews was the sense that products that felt clinical and related to orders from a doctor felt scary to the user and were avoided and ignored. Users seemed to want to avoid these solutions because they felt too serious to them. While health behavior improvement products are very serious and should be taken seriously during the development process, our users do not want to feel that seriousness. They want to feel like they are in control of their own situation and what they are doing is fun and enjoyable. When the fun and exciting nature of social media and gaming applications is integrated into a health-related application, a user will feel far more at home and want to engage with the solution more often. This method of combining fields of mobile development offers great opportunities for innovation and provides us with great opportunities to create a meaningful solution to our problem.