

RE:LIVE

# Capstone Process Book,

Theresa Pham AU22



## RELIVE, A Stroke Rehabilitation Program Abstract

RELIVE is a rehabilitation program with the Neurolife sleeve that combines hobbies and rehab together so they can be used and molded into patients' daily lives. It helps to elongate rehabilitation from five months to nine months, combining and cycling through at-home, clinical, and recreation use. Stroke rehabilitation can be a lifelong and slow process. Often when unable to see the tangible effects of rehabilitation, faced with the same routine over and over, patients start to lose motivation. They eventually stop practicing or only do so when in a therapy session, which does not improve their condition. Rehab is similar to working out, if they do not work out consistently they begin to lose muscle they have gained over time; frequency and consistency are vital in rehab. This program will help patients cycle through three types of rehabilitation over the year: at home, clinical, and recreational. Their schedule will start with clinical therapy and eventually move towards at-home use, and when the patient is comfortable, into recreational group sessions. This will be able to extend the length of rehabilitation over the span of a year and allow for the opportunity to be able to take rehabilitation classes and meet with other individuals that are like themselves.





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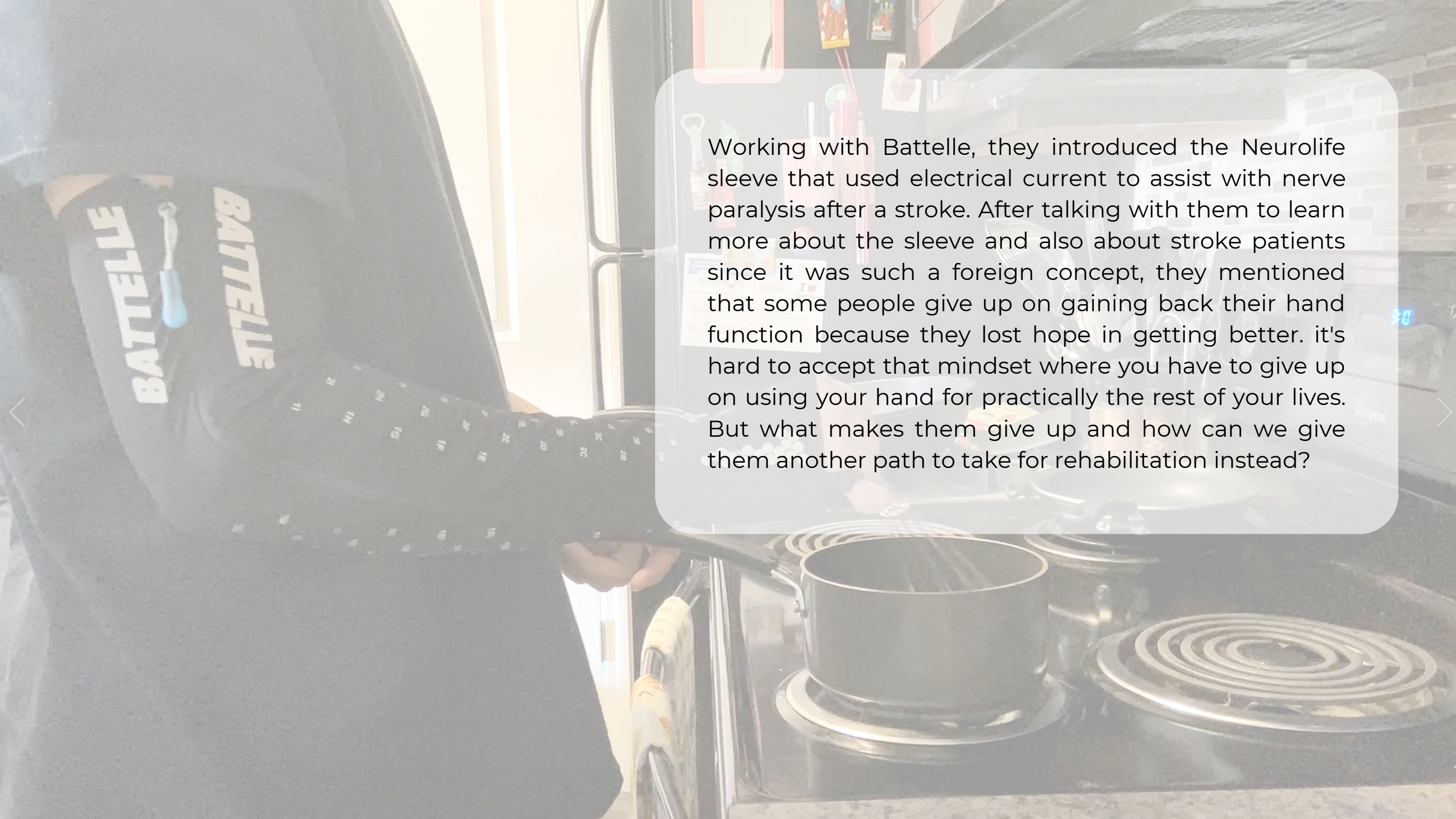
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A person wearing a dark lab coat with "BATTELLE" printed on the back is standing in a kitchen. The person's right arm is extended towards a stove. On the stove, there is a silver pot on a burner. The background shows a kitchen counter with various items, including a red container and some papers. The scene is dimly lit, with a soft light source from the left.

Working with Battelle, they introduced the Neurolife sleeve that used electrical current to assist with nerve paralysis after a stroke. After talking with them to learn more about the sleeve and also about stroke patients since it was such a foreign concept, they mentioned that some people give up on gaining back their hand function because they lost hope in getting better. It's hard to accept that mindset where you have to give up on using your hand for practically the rest of your lives. But what makes them give up and how can we give them another path to take for rehabilitation instead?

## Introduction

Stroke patients often have to go through rehabilitation for a long part of their life, if not all of their life, however, many lose the motivation to continually practice beyond the clinical setting but when their insurance runs out they have to be able to practice on their own time.

They can't just go on without practicing for the next six months while they wait for the next opportunity to go to rehab again, however, some and many do. It's difficult to give up on yourself and be able to be independent again as a patient, however, some accept that because they've given up on recovering and it shouldn't be that way. Trying to find out why people lose motivation and why they give up is something that is important and how to increase that motivation can be important for consistent rehabilitation and recovery.

My goal for primary research was to find what motivates people to keep a consistent rehabilitation and how to increase rehabilitation outside of the clinical space. Since it's been difficult to find occupational therapists and stroke patients to speak with due to privacy reasons, I tried to look for alternatives and I found that rehabilitation and working out is one of things that I found to be very similar to one another.



# BRIEF

**Project Statement:** How can we encourage consistent practice and prolong the length of rehabilitation throughout the year?

## Client: Batelle

Batelle is an independent not-for-profit company science and technology company that has helped the development of infrastructure, environment, health, and national security. They have also developed medical devices and tools for those health professionals.


## Objectives

I want to make the sleeve more accessible to users, inexpensive, and ease of use, but also give motivation for the user to use it on a regular basis to help with therapy on a day-to-day basis. Often there are lingering effects such as partial paralysis or nerve weakness for those that are older and have suffered from a stroke. Therapy and rehabilitation are given to those recovering from a stroke to help them gain back or increase mobility in certain areas. However, due to the cost of rehabilitation and the time needed to be invested in it, survivors over time begin to lose hope and motivation on recovering. I want to help incorporate rehabilitation into their daily lives to make it less expensive but also have it in their daily lives to use and practice. Ideally, they would be using the product or system in the comfort of their home, however, having it stationed at a local clinic or recreational center.

## Target Audience

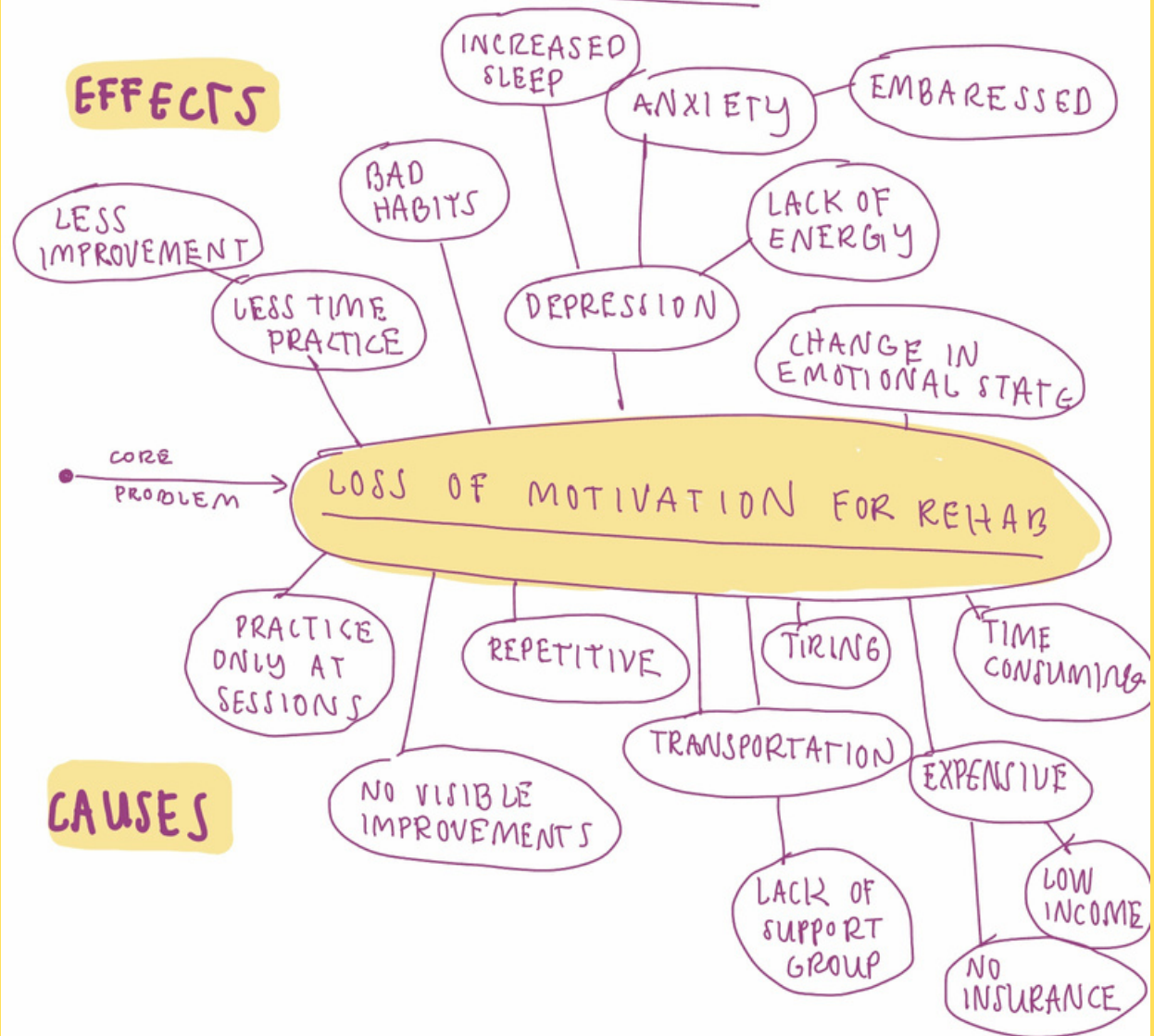
- The majority of recovering stroke patients are around the age of 65 or higher so I want to focus on older individuals recovering from strokes that are 65 or older. Many around this age have begun to retire and are no longer working so they spend a lot of time at home. They tend to not travel and go outside that much after post-stroke. Older individuals may have a small support system with just their family and a few friends.
- Rehabilitation centers/Therapists, by having an at-home rehabilitation the cost of therapy and time could be saved. They only need to go for a check-up on the patient every so often rather than every day or week.

## Project Goals

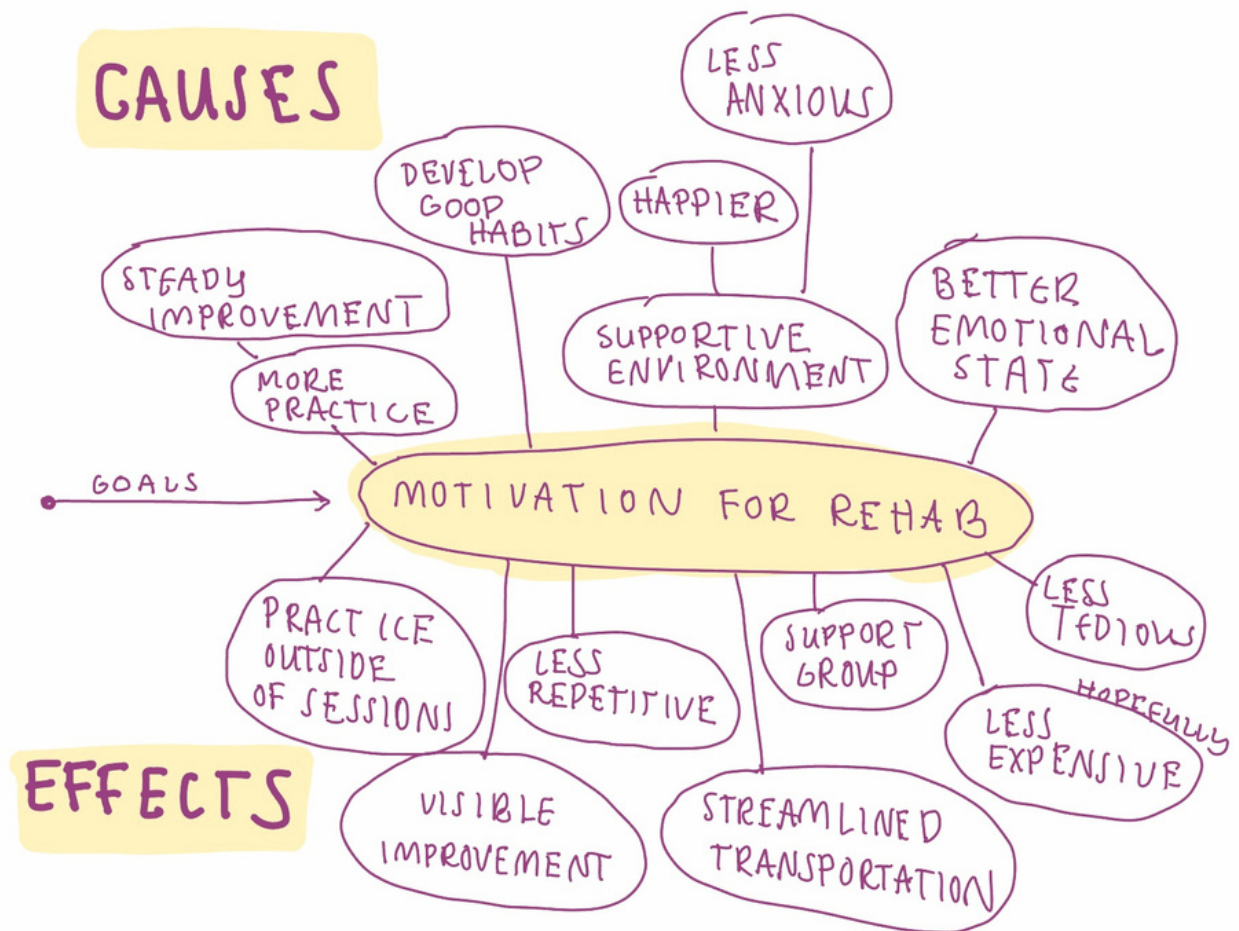
- Developing a product or system to make daily rehabilitation more fun and motivational in building a good habit of daily practice to better recovery.
  - Is adaptive to the user and can be easily adjusted by the user for easy and quick usage within the home.
  - Decreasing the time needed to visit the hospital and rehabilitation center, having monthly meetings rather than weekly meetings.
  - Consistent rehabilitation
- 

# Assessment & Goals

## PROBLEM MAP ASSESSMENT

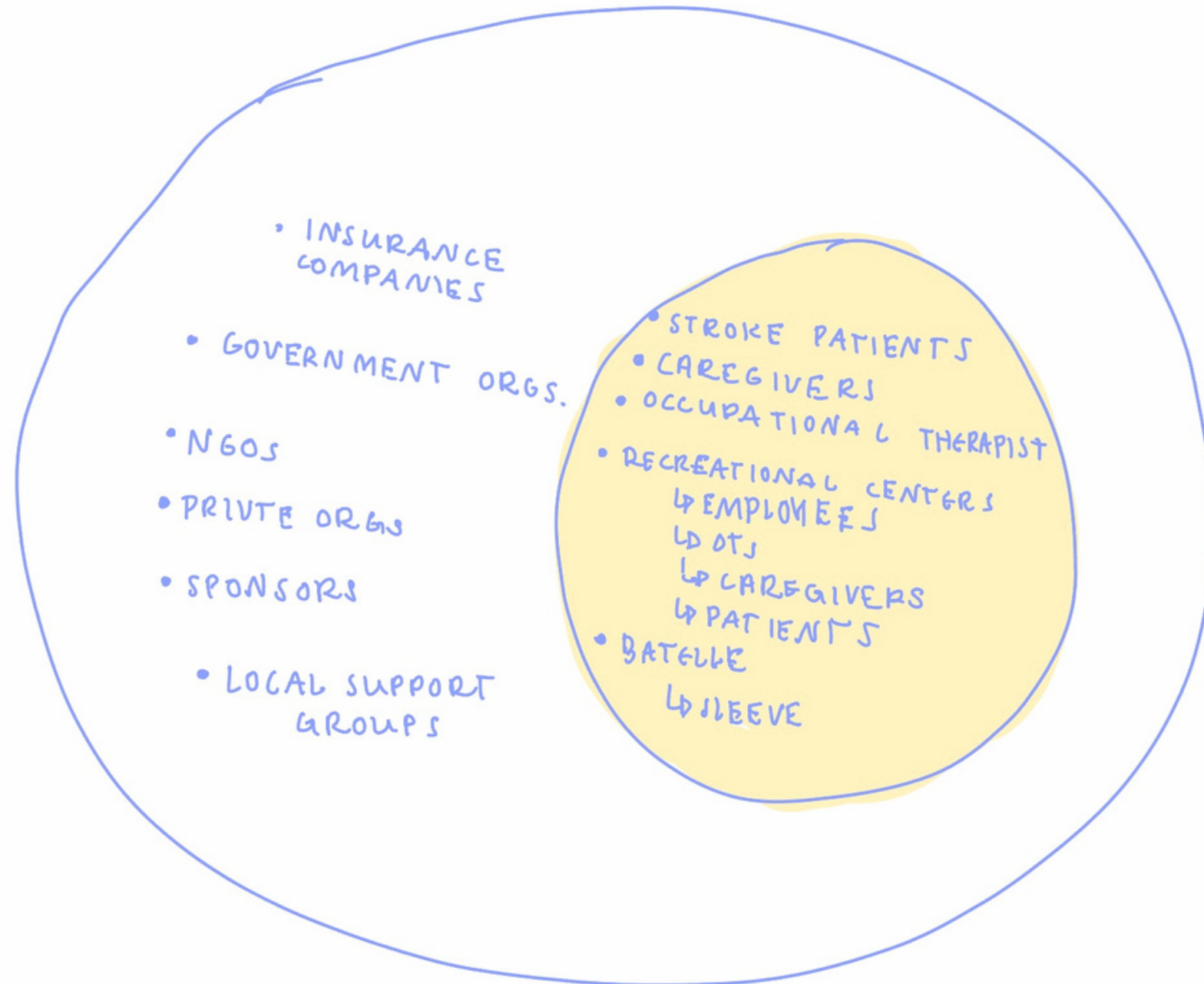


## GOALS





# STAKEHOLDERS



To ground myself, I listed the **primary** and **secondary stakeholders** for stroke recovery. In the yellow circle are the primary stakeholders while in the larger, white circle are the secondary stakeholders. Although there can be a lot more added to the list, this was the list that I mainly focus on for the rest of the project. Since it was more in the beginning stages of development, I didn't want to go into much detail out of concern of delving into something that may make me lose direction of my initial brief.

## Research on Working Out Habits

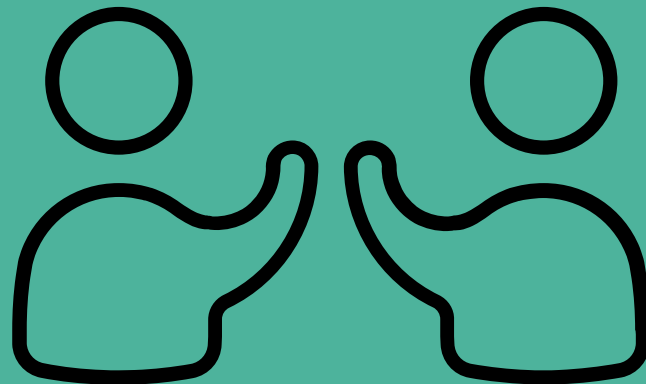
Rehab is similar to working out and finding what works for people that work out, which can be similarly translated to increasing consistency in rehab routines. Of course, it isn't exactly the same, however, the habits and behaviors of keeping a consistent workout routine can let me know a lot about human behavior that can translate into rehab routines. Talking to a few people that have worked out for a long time in their life and some that maybe started recently helped me figure out some basic understanding of how to keep moving forward with a learned habit.

There were three things that I broke down and found to help build a good habit of working out:

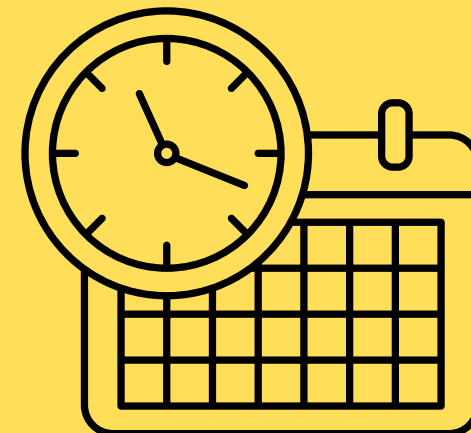
LOCATION



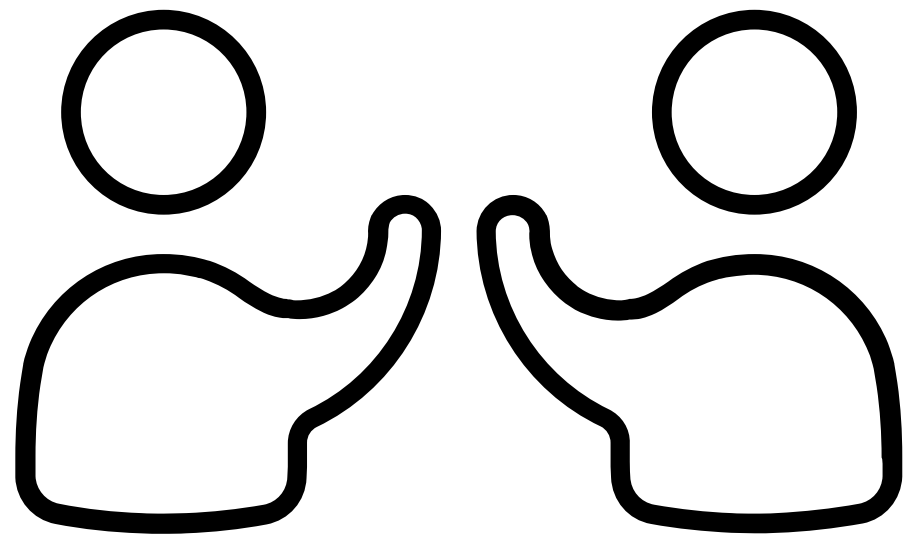
COMPANIONS



CONSISTENCY



The first is location, many found that being at home makes them less likely to work out or even less motivated in doing so. What helped them to find that motivation was to go to a gym where everyone is working out and where all the machinery you could ever need was there too. They'd feel motivated to work out and be more productive consistently because everyone around them was doing so. Similar to why people go to the library instead of being at home to study and work on assignments when you see people working hard, it makes you also want to work hard.



The **second** was a friend or a companion. Having someone there with you and also struggling or working out with you makes you more motivated to do it. They can also be there to keep you on track or motivate you to keep going if there are days when you don't want to go or if you don't feel motivated to go. They're the ones that keep you on track to the goal, and also vice versa, you can also keep them on track too on days when they feel unmotivated to do so. Having someone to keep you company while doing things is very comforting and also less stressful because you're both new at it or you're both willing to learn with each other.

The third and last good habit I found about working out, was consistency. Although many might overlook this fact, it's something that can be very important on days when you feel unmotivated or struggling. Having a consistent schedule where you go every Monday and Wednesday really helps you maintain working out for a long period of time because on those days when you don't feel motivated, having a daily schedule to help you through can ground you and also make them feel reassured. Similar to having a routine and schedule in school, having peace of mind that there is a sense of stability in your everyday life.

Through these primary interviews, I found there were three things that can possibly help with rehabilitation consistency is: having a safe place to practice, support of friends, family, or companions to do so with, and having a consistent schedule to follow every week.

## Primary Research: Surveys

The majority of stroke patients are above the age of sixty, and after that age, their chances of getting a stroke are doubled. Often those above the age of sixty are retired and don't work and after my survey research, generally stay at home, and those suffering from a stroke, they stay home even more afterwards. Perhaps it's from embarrassment from needing help from those around them, but they generally go outside less after having a stroke.

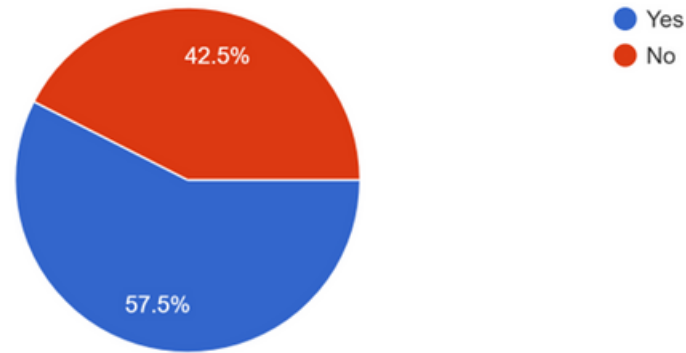
From my own research and looking at a previous upperclassman's research, I found that seniors often feel lonely at an older age. All their kids have grown up and become independent, their grandchildren have so too, and have their own life outside of their homes. Maybe all their friends have all moved away or so on, and the people they mainly see every day are their family but often they are away at work, school, or time for themselves and their own friends.

Having a good support system is something that is important in recovery, however, they can't always be there for you and there are some things that you can only easily talk to a friend about and not family. Being independent is something that people enjoy and also thrive from and having a support system outside of the family is important but older seniors may not have the resources to find people like that if they can't leave the house often.

Finding a hobby is something that older people tend to do when they have more free time, often without the worry of money and working, they try to find something they never knew they were interested in or didn't have the luxury to be interested in. From my survey, I asked people what activities they weren't able to do anymore and some listed hobbies that they had such as gardening, hiking, etc. For older individuals, being unable to do a hobby in their free time anymore can be crushing because it was the one thing that makes them happy. I wanted a way so that these individuals would be able to do something they love again with the help of rehabilitation.

Do you have a consistent daily routine that incorporates rehab?

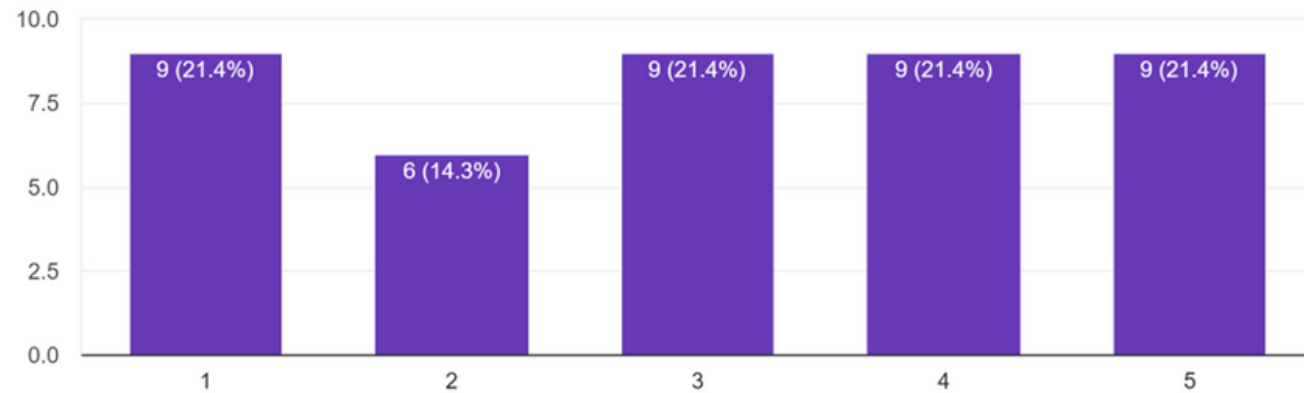
40 responses



There are a few questions from my survey that helped with understanding more about [the life of a stroke patient after a stroke](#) and during or after rehabilitation. I wanted to know if their [eating habits](#) had changed and their [social life](#). What things were they unable to do anymore, what was interesting was that I left a box for other answers and many wrote of [hobbies](#) they were unable to do anymore.

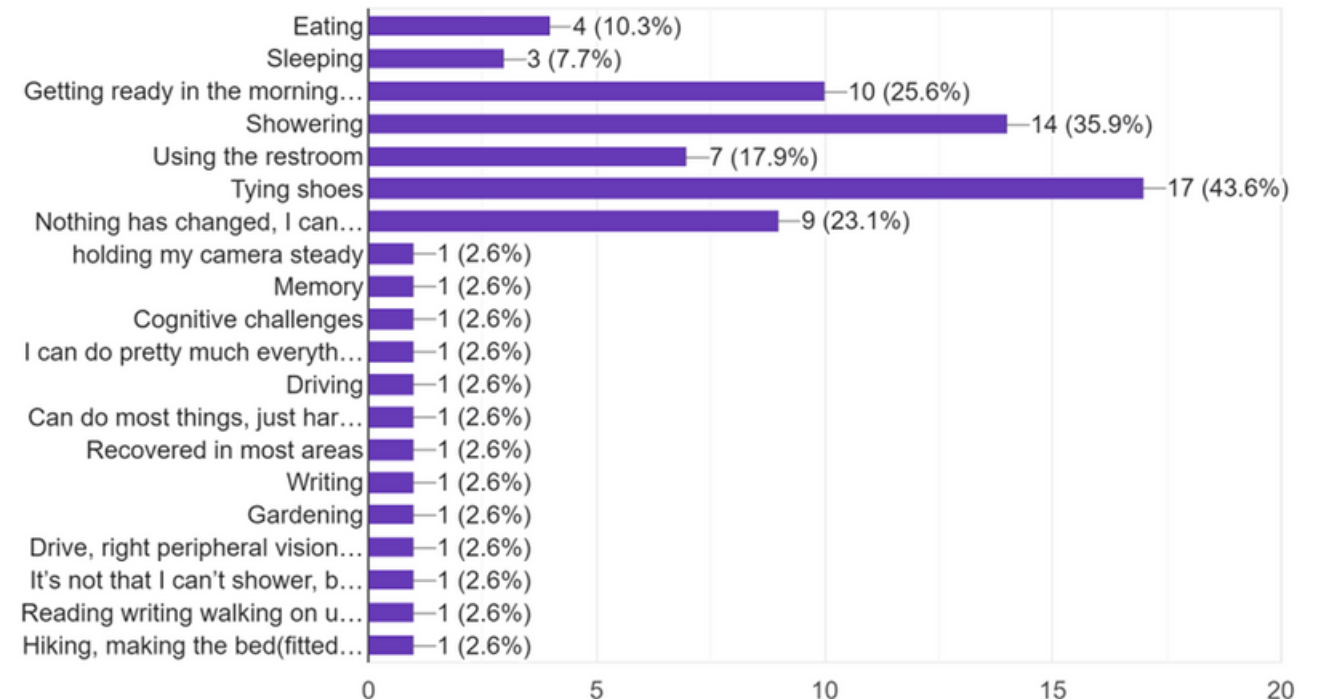
Has there been a change in diet post-stroke?

42 responses



What main activity(s) are you unable to do or do by yourself anymore?

39 responses



Link to all the questions and responses to the survey:

[HTTPS://FORMS.GLE/5P86PSX3X7B5PRJE8](https://forms.gle/5P86PSX3X7B5PRJE8)

SURVEY RECEIVED 42 RESPONSES FROM STROKE PATIENTS AND SURVIVORS

## POST-STROKE REHABILITATION & ACTIVENESS

by theresa pham

### TIME SINCE HAVING A STROKE



**44.2%** HAD A STROKE 1-5 YEARS AGO

**23.2%** HAD A STROKE MONTHS AGO

**18.6%** HAD A STROKE MORE THAN 5 YEARS AGO

**13.9%** HAD A STROKE DAYS OR WEEKS AGO

### REHABILITATION

#### ATTEND REHAB REGULARLY



**46.3%** NO

**36.6%** YES

**17.1%** OCCASIONALLY

#### HAS A DAILY ROUTINE THAT INCORPORATES REHAB



**57.9%** YES

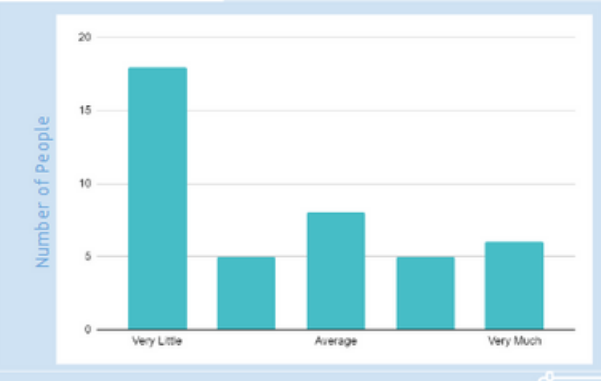
**42.1%** NO

## FREQUENCY OF WORKING OUT

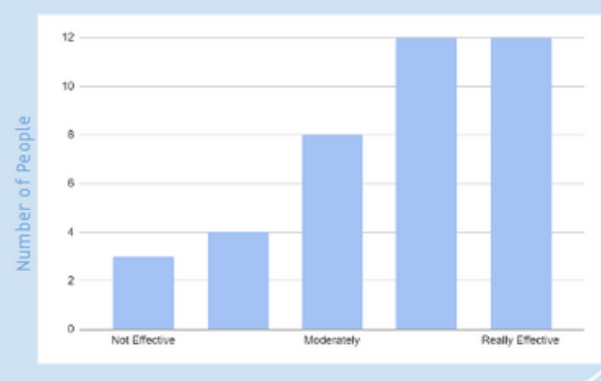
### BEFORE THE STROKE



### AFTER THE STROKE

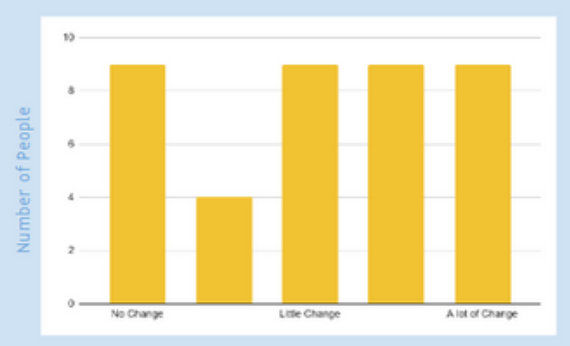


### EFFECTIVENESS OF REHAB

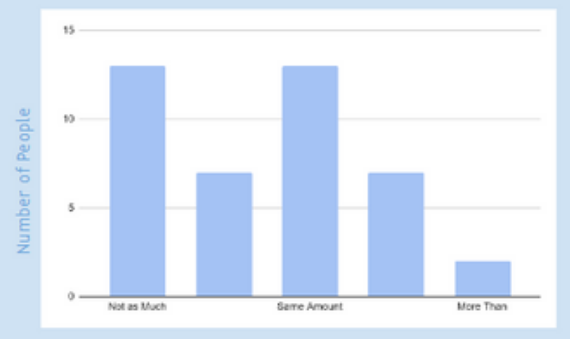


## DIET & OUTDOOR ACTIVITIES

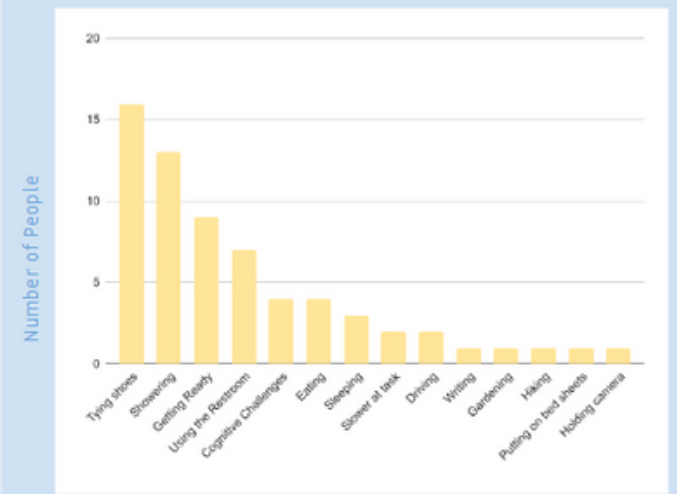
### CHANGE IN DIET POST-STROKE



### GO OUTSIDE TO EAT OR DO ANYTHING OUTSIDE AS MUCH AS PRE-STROKE



## TASKS WITH DIFFICULTY



**43.2%** HAVE DIFFICULTY TYING THEIR SHOES

**35.1%** HAVE DIFFICULTY SHOWERING

**24.3%** HAVE DIFFICULTY GETTING READY IN THE MORNING

**18.9%** HAVE DIFFICULTY USING THE RESTROOM

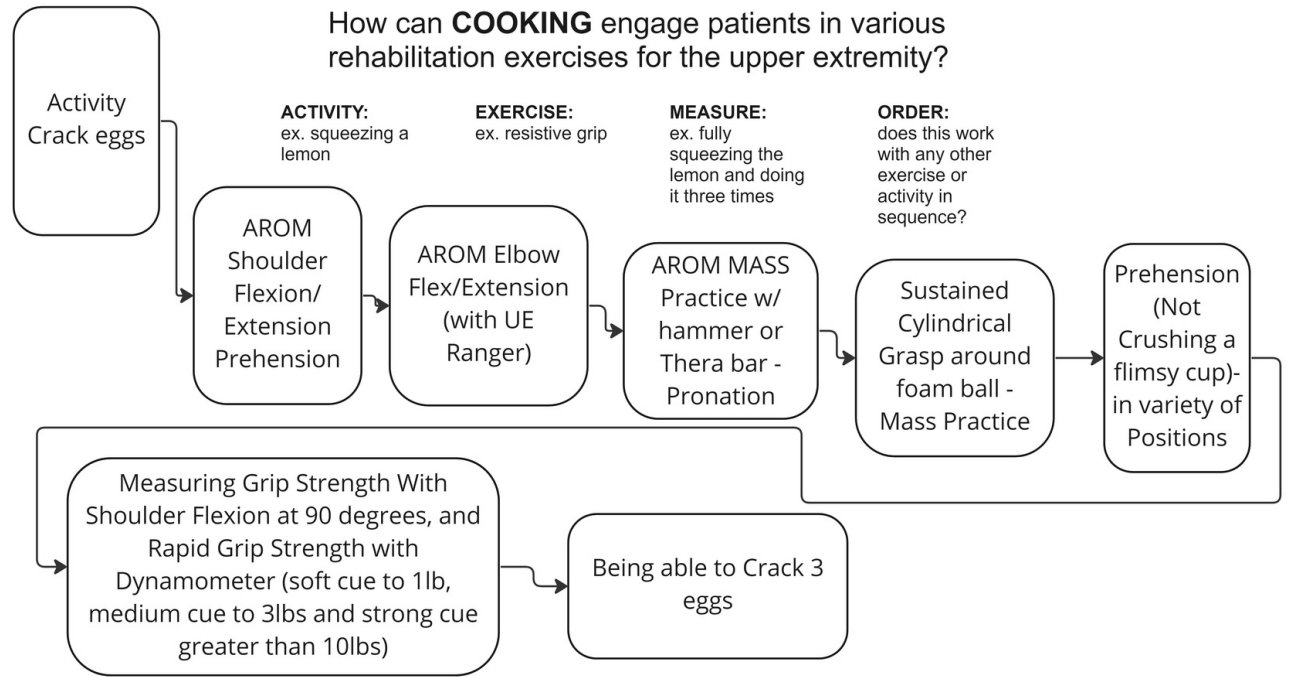
**10.8%** HAVE DIFFICULTY WITH COGNITIVE CHALLENGES

For a more consumable visual, I put my finding into my poster and made comparisons between aspects of their life before and after a stroke, mainly diet, active living, and outdoor activities.





Activity Card Prompts - COOKING

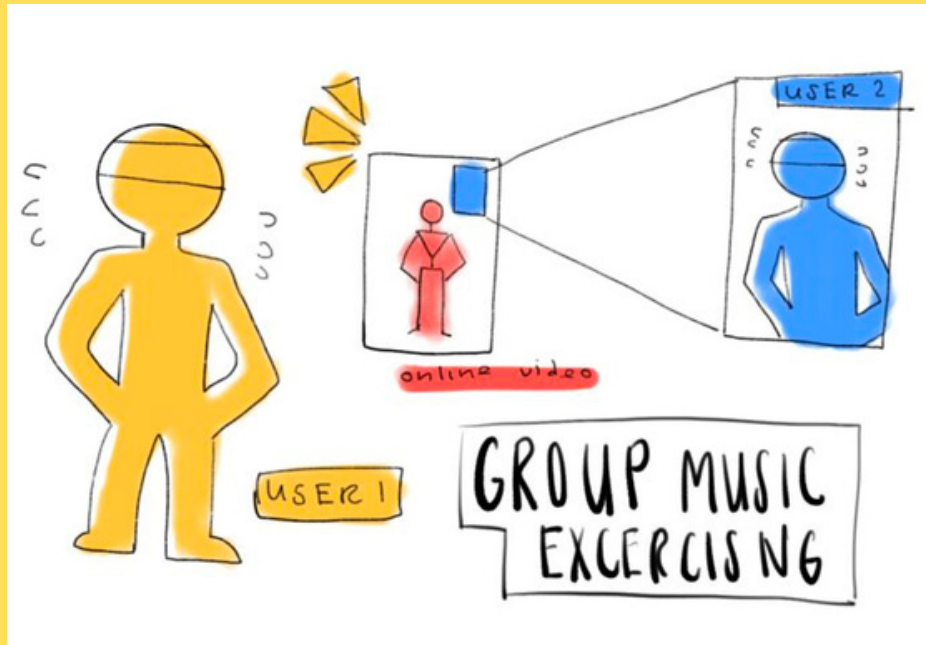


Activity Card Prompts - GARDENING



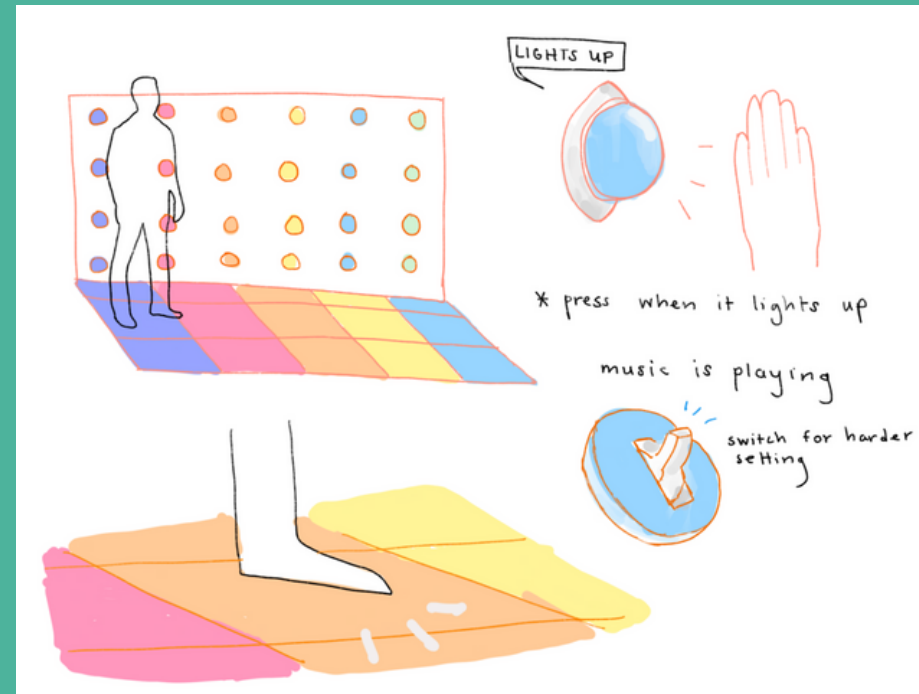
EXERCISES	Who is this exercise for?	How to measure success of exercises
Resisted Grip Exercises: gross grasp with therapy, stress ball, tennis ball	Mild to moderate	Mild: level of resistance of therapy/stress ball etc.
Finger Opposition	mild to moderate	mild (opposition of each finger)
Wrist Extension /Flexion	mild to moderate	able to extend wrist against gravity (palm down)
Static hold and release of a tennis ball	moderate to severe	strength of grasp, number of repetitions
Pinch Strength	mild/mod	number of repetitions, strength of pinch, level of resistance to pinch
Radial/Ulnar Deviation	mild-mod	able to move hand laterally away from midline at wrist with palm down (ulnar dev)
Forearm supination/pronation	mod	with forearm in neutral, able to turn palm down (pronation)
Bicep Exercises (bicep curls, hammer curls)	mod	Ability to move through full ROM without resistance
Tricep exercises (overhead extension, chair pull ups)	mild	Ability to move through full ROM without resistance
Shoulder exercises (over press, lateral side raises)	moderate/severe	Ability to move through full ROM in Gravity Eliminated Field
Coordination/Reaction exercises	mild	number of successful attempts vs unsuccessful
Bimanual exercise	mild	ability to match/perform action bilaterally
Scapular stretch cat/cow in 4 pt	mod (if able to wt bear)	Amount of time spent tolerating weight bearing, ability to bear weight independently
Large ball roll for shoulder AROM and motor control	moderate	controlled, smooth movement with no loss of balance
towel slide/bilateral FF and ABD	moderate/severe	moderate: active completion of towel slide
Shoulder openers/scap abdu/humeral ER	mild-severe	Patient has no subluxation or pain through task if has pain or sublux this would be contraindicated
		Moderate: (attempt of opposition - i.e. seeing muscle activation)
		able to flex wrist against gravity (palm up)
		Amount of time able to hold (in seconds)
		able to form functional tripod pinch, number of repetitions, strength
		able to move hand medially away from midline with palm down (radial dev)
		with forearm in neutral, able to turn palm up (supination)
		Number of repetitions, amount of weight
		Number of repetitions, amount of weight
		Ability to Move through ROM in against Gravity Plane
		amount of time spent actively participating
		affected extremity doing ~50% of the work
		ability to perform movements in controlled fashion
		severe: passive completion of towel slide
		Patient has appropriate glenohumeral moves through activity
		no dropping/ability to gently releases
		control with time, distance with tape measure
		ROM and completeness to endrange
		dynamometer for strength and time for carry/wrist motion for isolated control
		pinchmeter
		ROM
		is this a strength with wt. if so, completion with smoothness to action
		ROM and ability to complete both shoulder stability and elbow extension
		Has decrease in subluxation/instability meet reason for patient having to complete this activity
		coordination measures (dysdiadoch okinesis)
		symmetry
		assess wt bearing and of upper extremity for stability and then bilateral/ROM control for cat/cow
		loss of balance and ball control
		assess length of reach and in all planes (could also try ER position)
		symmetry of both affected and not affected UE while performing this activity
		ROM available, ability to reach targets
		Shoulder AROM Measure: and Manual Muscle Testing Measures
		5/5 MMT with no or minimal subluxation
		level of resistance during bimanual task

## Business Conjecture



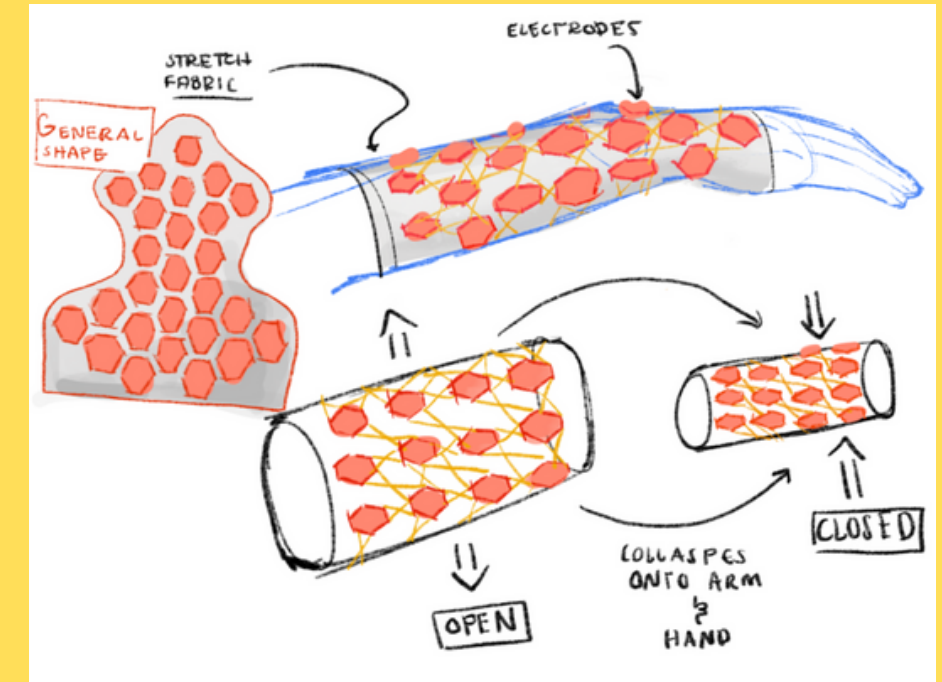
Insight: Doing an activity with someone else who is also inexperienced makes it less stressful and fun.

## Art Conjecture



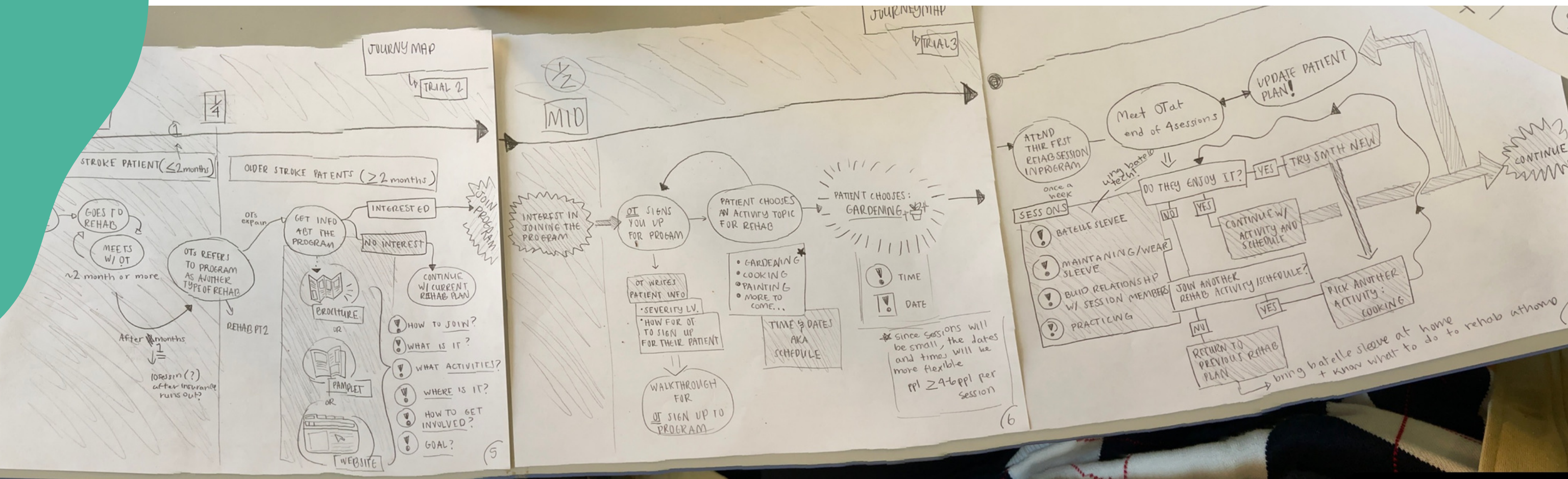
Insight: Having prompts to follow makes it easier to do and less stressful than being left on their own.

## Science & Tech Conjecture



Insight: Being able to adjust something by themselves gives them a sense of control and also is more time efficient than a third-party intervening most of the time.

Doing conjecture is more of an exploration of the different concepts from the information I found from my research and what are the main insights I gained from each topic. It is just for exploration and testing boundaries to learn more rather than use as my final concept.



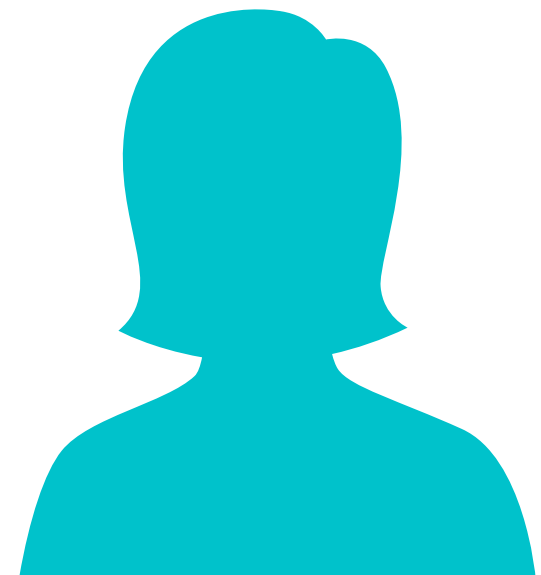
After my research and analysis, I came upon the idea of developing a program that mixes hobbies and rehabilitation together. Where individuals can go to a recreational center and do rehabilitation through a hobby of their choosing. This image is a general outline of how one would join the program; mainly through their occupational therapist, and steps through the program. I wanted to draw the main idea out from how to start to what the end would be like.

For the **formative assessment**, I wanted to see if seniors picked up new hobbies as they grew older or was just a saying among people. I also wanted to learn, within a classroom setting, what is the most optimal class size for other to develop meaningful relationships around them and also get the assist they needed.

For the first question, I asked if they would be interested in a program such as this to learn new hobbies and interests.

From my research, there is a consistent number of seniors that go to recreation centers for classes and activities, however, there is an inadequate amount of space, funding, and staffing. So there is a growing amount of seniors that enjoy going to these recreational centers, but not enough resources to allow for them all to take what they would like.

While attending classes at the recreational center, the caretaker can either be taking a class at the same time on something that may interest them too, or some recreational centers have free food drives where they can just drive-thru, and the food will be dropped off inside their car for them. Although, it might be in another recreational center but is an option if the caretaker or driver would like something productive to do while waiting.



The second question was: do you find yourself in time, do you think your interests and hobbies have changed compared to around a few decades ago? Have you found yourself to be picking up activities that you were not interested in or had done when you were younger?

Through casual talks with older individuals and other people that know older individuals and what they have said, is that, as they grow older, they become more interested in things that have never been interested in before. That there is a change once they hit a certain age, something changes, and grow gradually more interested in other activities. One older individual mentioned picking up gardening as she got older to do in her free time. This was due to having more time as an older individual and not having to constantly work to make money all the time as when she was younger. She wishes to be also to travel a little more because she now has the free time to be able to do that.

Another individual that is in my life picked up videography in his free time, he is a senior above the age of 65. Before he was also similarly busy with work and not having the time to do anything else but after retirement, he picked up videography and like to make videos of his casual travels. Someone I talked to mentioned how they talked to their parents about the changes once they grow older (bird watching).

## My third and last question was: would being in a larger group setting or a smaller group setting be more comfortable?

- A few more questions for future consideration:
  - Considering group numbers and group genders
  - Will women feel more comfortable around only women and vice versa for men?
  - Groups with stroke recoveree and caregiver together than just stroke recoveree's

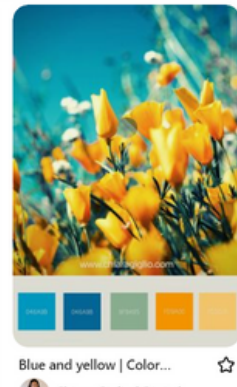
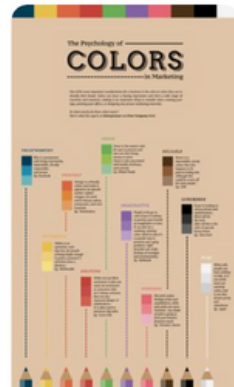
It would be more beneficial for a smaller group setting of around 4-6 people in a session. Small group sessions are more informal and brief; they help develop relationships with other group members and faculty and improve psychological well-being. It also allows people that may be quieter and shy to not feel pressured or overwhelmed in a large group setting. The main reason for these group setting away from the house is to encourage meeting other people that may be like them for a sense of companionship and camaraderie with others, and most importantly to be able to formulate new bonds with others. Often, as people get older, it gets harder to meet new people, and there is a sense of loneliness in the older individuals (previous year senior thesis researched this) this group allows them a way to meet other people and able to bond during a hard time together.

I was also able to ask a friend who works a lot with young children, as a student teacher, with a wide variety of age groups about her perspective on large groups versus small group settings. Smaller groups are better for talking and getting to know people. It's much less intimidating to speak up and talk, compared to a large group setting. Often, in larger groups, people are much more self-conscious about speaking up and tend to feel overwhelmed by the number of people. Smaller groups can help for a more intimate relationship with each other and also feel less pressured to speak up. It also helps with engagement in the group too. She also mentions that it can create a kind of shared small group experience of comradery where people feel connected because they shared that small group experience together.

Relating back to the beginning of my research on working out habits. I have heard from multiple people that there are three things that help motivate them: consistency, location, and company. People are more likely to keep working out if they are on a consistent schedule, so even on days they don't feel like going, the habit of consistency is what keeps them going. Location is another big factor for some, for others can work out at home and it can be more beneficial for them, but some like to be in an environment such as the gym because it gets them in the exercise mindset. And lastly, company, people are more likely to keep a consistent schedule when they have someone else to keep them accountable and keep them company while working out. It's always nice to have someone to talk to when you might be struggling and figuring things out.

What I am aiming for are group meetings and activities to help individuals build rapport and supportive relationships with people that are like them. To learn together and meet with others that are going through the same struggle and work with each other to support one another.

As individuals get older, they have a harder time meeting new people and eventually reach a point where their support group is mainly their family. It's important to have a good support group around them since there is research to show that there is a relationship between recovery and quality support groups, however, some people don't have that support group or struggle to get acclimated to their new lifestyle and need someone or some people to confide into that are similar to them; that is the main goal for these group activities.



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## Colour Theory

Generally, the color associated with medicine is blue, even Battelle, their logo is dark blue. Blue is often associated with medical health and hospitals. However, rather than going off of that, I wanted something that incorporates blue but also something more light-hearted because although this program is designed in a medical sense.

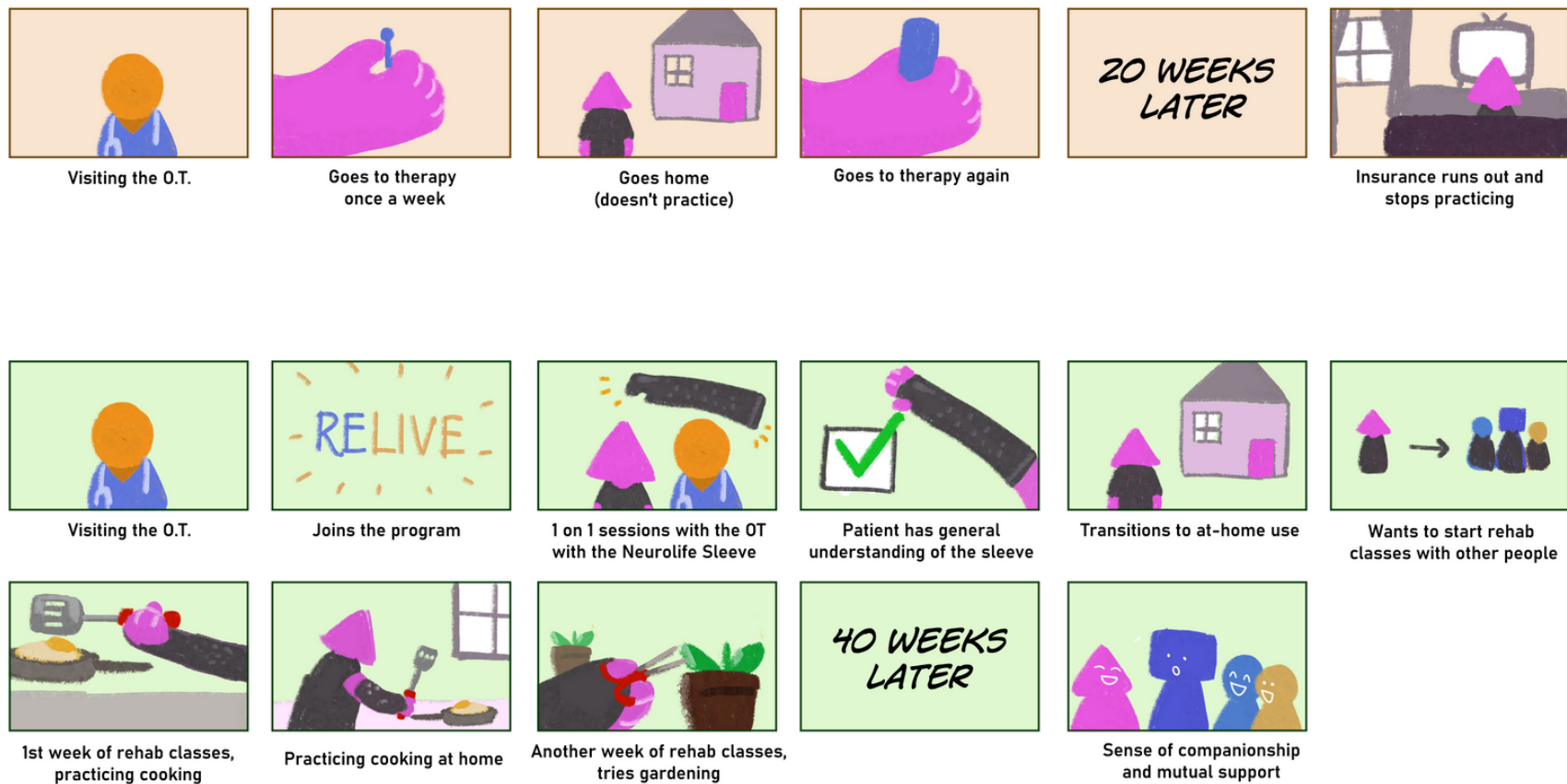
The basis of the program is more than just trying to "heal" the individuals, it's about meeting with others and helping you incorporate rehab into your daily life through hobbies. So after looking at colour theory, I decided on yellow and blue. Yellow being energetic and bright, while blue is calm and gentle.

### COLORS BRING Emotion

<b>BLUE</b> TRANQUILITY, SECURITY, INTEGRITY, PEACE, LOYALTY, TRUST, INTELLIGENCE COLDNESS, FEAR, MASCULINITY	<b>TURQUOISE</b> SPIRITUAL, HEALING, PROTECTION, SOPHISTICATED ENVY, FEMININITY	<b>GREEN</b> FRESHNESS, ENVIRONMENT, NEW, MONEY, HEALING, EARTH ENVY, JEALOUSY, GUILT	<b>YELLOW</b> BRIGHT, SUNNY, ENERGETIC, WARM, HAPPY, PERKY, JOY, INTELLECT IRRESPONSIBLE, UNSTABLE
<b>PURPLE</b> ROYALTY, NOBILITY, SPIRITUALITY, LUXURY, AMBITION, WEALTH MYSTERY, MOODINESS	<b>PINK</b> HEALTHY, HAPPY, FEMININE, SWEET, COMPASSION, PLAYFUL WEAK, FEMININITY, IMMATUREITY	<b>RED</b> LOVE, PASSION, ENERGY, POWER, STRENGTH, HEAT, DESIRE ANGER, DANGER, WARNING	<b>ORANGE</b> COURAGE, CONFIDENCE, FRIENDLINESS, SUCCESS IGNORANCE, SLUGGISHNESS
<b>BROWN</b> FRIENDLY, EARTH, OUTDOORS, LONGEVITY, CONSERVATIVE DOGmatic, CONSERVATIVE	<b>TAN</b> DEPENDABLE, FLEXIBLE, CRISP, CONSERVATIVE DULL, BORING, CONSERVATIVE	<b>GOLD</b> WEALTH, WISDOM, PROSPERITY, VALUABLE, TRADITIONAL EGOTISTICAL, SELF-RIGHTEOUS	<b>SILVER</b> GLAMOROUS, HIGH TECH, GRACEFUL, SLEEK INDECISIVE, DULL, NON-COMMITTAL
<b>WHITE</b> GOODNESS, INNOCENCE, PURITY, FRESH, EASY, CLEAN ISOLATION, PRISTINE, EMPTINESS	<b>GRAY</b> SECURITY, RELIABILITY, INTELLIGENCE, SOLID GLOOMY, SAD, CONSERVATIVE	<b>BLACK</b> PROTECTION, ELEGANCE, DRAMATIC, CLASSY, FORMALITY DEATH, EVIL, MYSTERY	

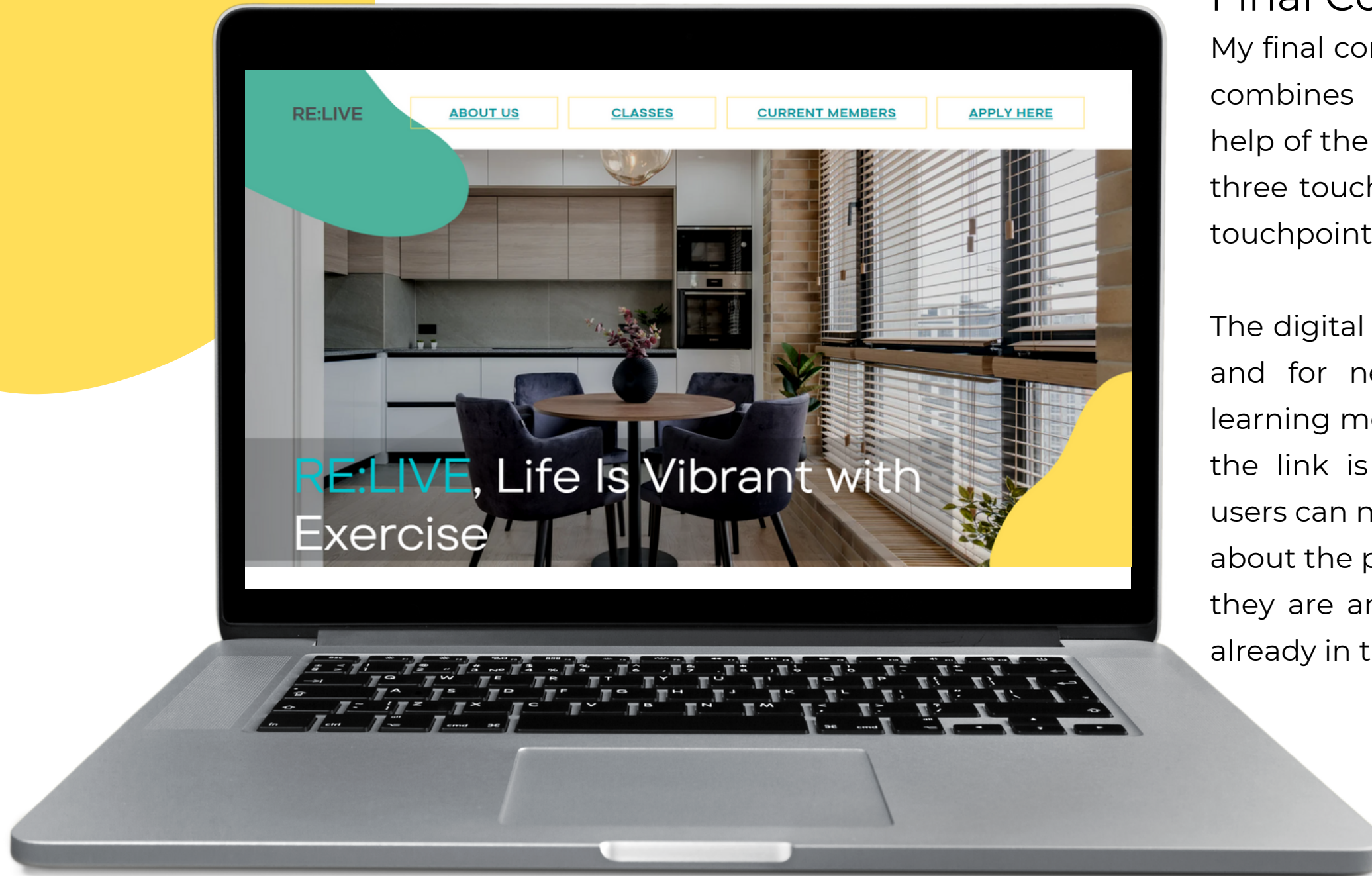
CoSchedule





## Storyboard

This is my initial sketch for my storyboard and the one in color is the final. I wanted to pick colors that popped for older individuals, and that is why I chose very bright colors. A lot of older individuals, as they get older, they become more drawn to brighter colors, perhaps because their eyesight isn't as good as it used to be but often, seniors find brighter colors to be more interesting. I wanted it to feel more playful but simple to follow, that is why colour and shape are something I focused this type of style. Something that was easy to follow and also showed the fun nature of the program.



## Final Concept

My final concept is a rehabilitation program that combines rehabilitation and hobbies with the help of the Battelle Neuroife sleeve. It consists of three touchpoints, one digital, and two physical touchpoints.

The digital website is for occupational therapists and for new patients that are interested in learning more about the program. Connected to the link is a mock, interactive website where users can navigate around and learn information about the program or sign in to specific portals if they are an occupational therapist or a patient already in the program.

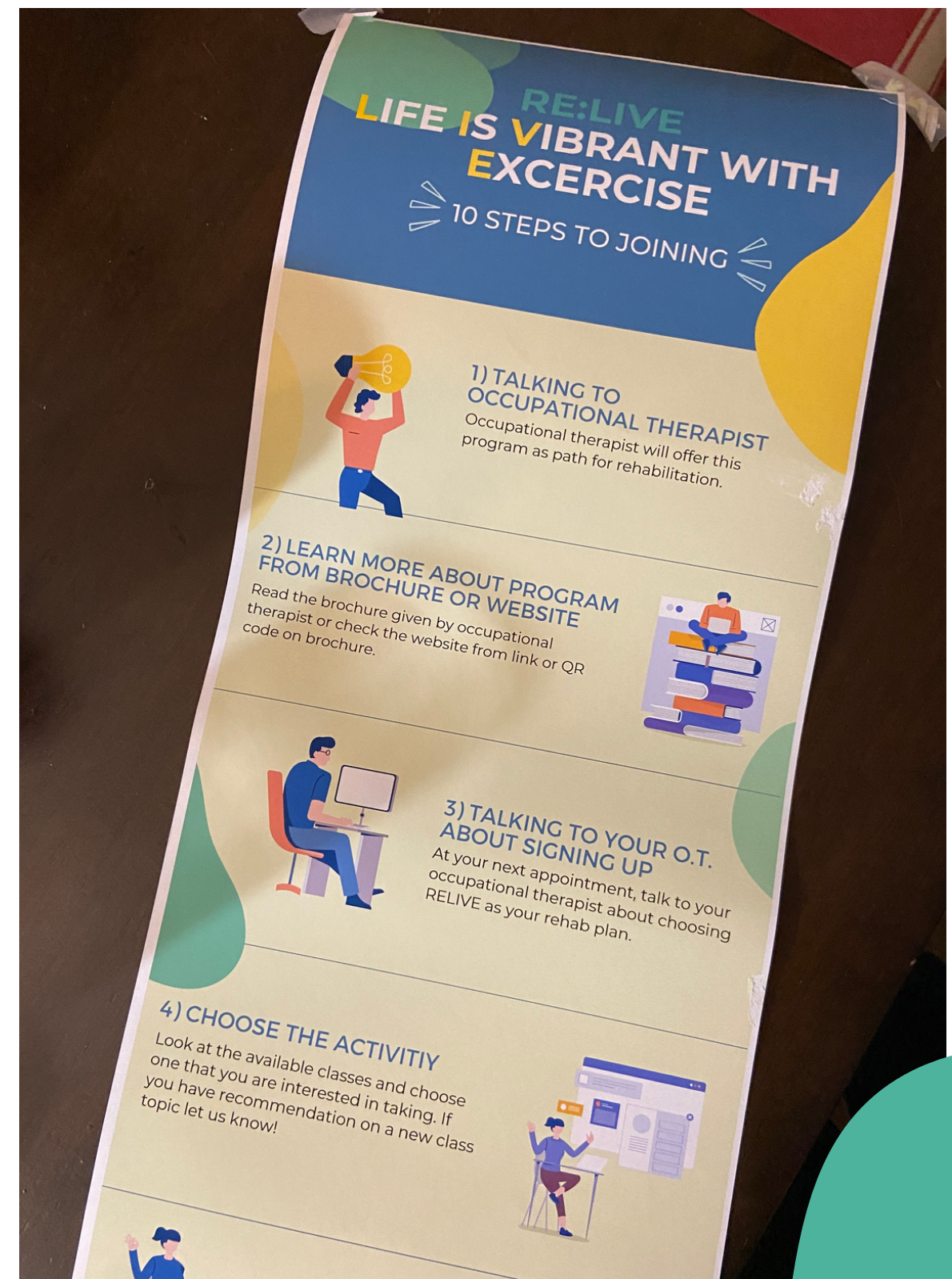
<https://reliveyourlife.my.canva.site/>



## Physical Touchpoints

The physical touchpoints are brochures and an infographic that can be hung up in an occupational therapist's room or a small one that patients can take home with them alongside the brochures.

Digital technology can be confusing for older individuals to navigate around and even then, some may find it easier to read from something they can hold instead. If they were bored and sitting in the lounge area, they can just read up quickly on the info and ask their O.T. about it later.



## Reflections: Things to consider for future

After critique, I found more things that I could delve more into if I wished to continue developing this program. There are many things that can be improved on and investigated a lot more and although there are a lot of gaps that need to be filled in and many things to consider for this program to be possibly tested more in the future, I found myself to enjoy developing this program and will most likely continue to do more research on it as I grow as a designer since there are many things I current lack as an inexperienced designer. I found that I have learned a lot from this capstone project and that it was a great pleasure to work alongside Battelle for my final project since it by chance relates to my original direction when I first started the major to work as a medical device industrial designer.

If I were to continue researching and developing this program in the future, I would need to look more closely into the backend of who and how this program will run. Money was one of the main concerns when developing this program, I considered recreational centers as my main location to house the program for a less expensive alternative, however, after doing research and realizing that there is an increasing number of people using recreational facilities throughout the years but not enough people to help run it, it was evident that funding for not only employees for the program but also management team, materials for classes, and much more. Being able to find possible outlets for funding is important to help a program run and is something I sadly had to overlook due to time constraints. Still, I considered looking at NGOs, government funding, grants, etc. for possible outlets for possible financing.

Next was to find the people that keep the program running such as the employees, the occupational therapists on sight, maintenance personnel, teachers, and medical staff in case of emergencies. One of the main personnel that needed to be present in the program are occupational therapists, however, unfortunately, there is a shortage of O.T.s within the field. Where would be able to get into contact with potential O.T.s that would like to work with us and how can we create a system that can possibly work around that shortage of workers? There is currently already a rehabilitation program currently but being able to offer a different approach to rehabilitation than those that are already out there since feeding into exact same system doesn't add value to it.

## Links

<https://www.nrpa.org/parks-recreation-magazine/2017/july/parks-and-recreation-serving-a-growing-older-population/>

<https://columbusrecparks.com/community-center/blackburn/>

<https://www.hks.harvard.edu/sites/default/files/Academic%20Dean's%20Office/Guide%20to%20Small-Group%20Learning.pdf>