

PSYCH!

An IoT aid for mental health during an extended lockdown scenario



MEET THE TEAM



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INTRODUCTION TO PROBLEM

Currently, an estimated 2.6 billion people – 1/3rd of the world's population – is living under some kind of lockdown or quarantine.

While many people are experiencing heightened anxiety as they cope with the impact of the COVID-19 pandemic, the challenges of life in lockdown may be particularly complex for people with existing mental health conditions.

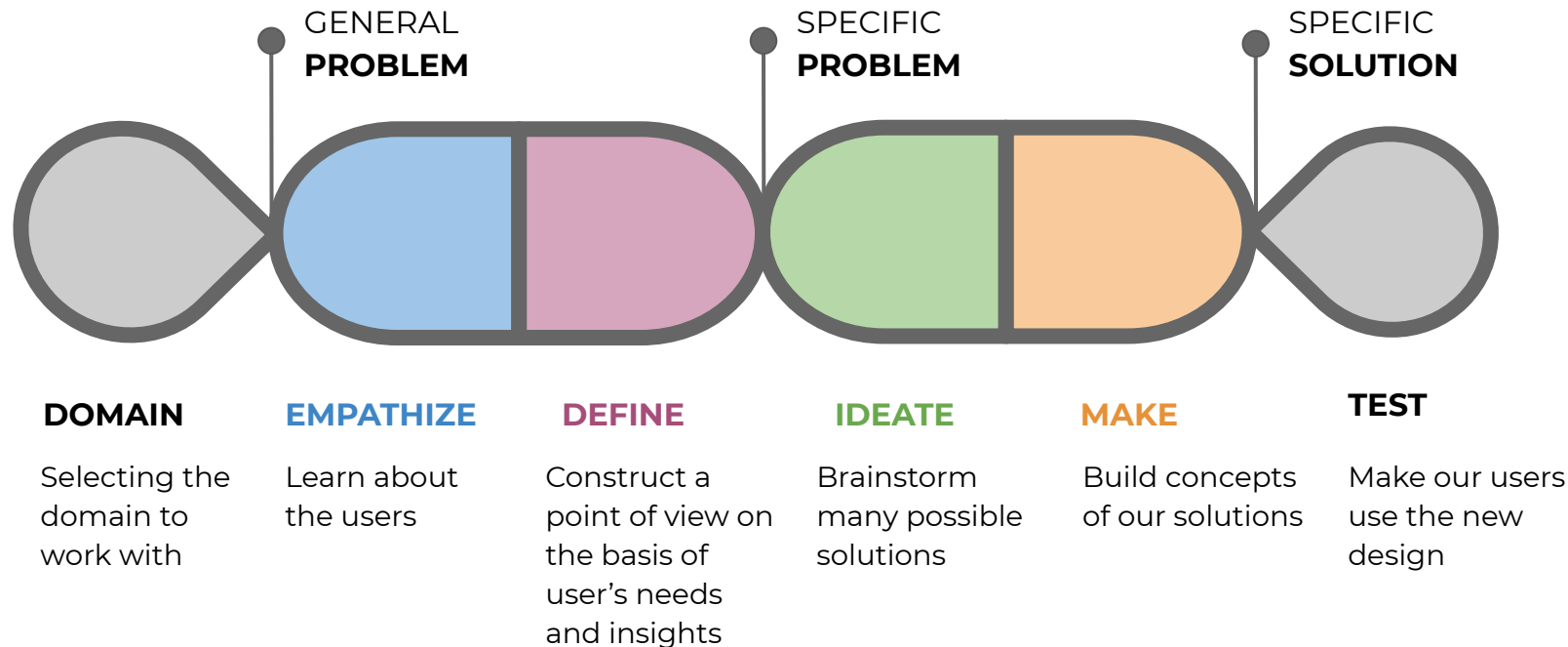


URGENCY OF THE PROBLEM

There is a surge in mental health issues and a rise in suicide rates caused by isolation, poor lifestyle patterns, and sedentary living. Deterioration of mental health during this lockdown may cause lasting effects on the individual's psyche, even beyond the pandemic.

Hence, tackling the mental health issues and the stigma around it faced by the Indian population is one of the important task to focus upon.

DESIGN PROCESS



PROBLEM STATEMENT

“HOW MIGHT WE **create awareness** about existing **mental health** issues and **empower people** to manage it during an extended quarantine scenario”

EMPATHIZE

METHODS DEPLOYED

LITERARY RESEARCH



Understanding of situation from data available through previous research, news and other projects.

IMMERSION



This process could give us a lot of insight as all five of us lived in various parts of the country, some with and without family.

QUESTIONNAIRE



A set of questions were circulated amongst the target group to understand their struggles with mental health during lockdown.

USER INTERVIEW



Few candidates opted to provide us with their contact details for a telephonic interview, which helped us understand them better through conversation.

EXPERT INTERVIEW



Psychologists/ therapists were contacted through video calls to understand the real issue.



LITERARY RESEARCH

LOCKDOWN'S AFFECT ON MENTAL HEALTH

This will result in a secondary epidemic of burnouts and stress-related absenteeism in the latter half of 2020. Taking action now can mitigate the toxic effects of COVID-19 lockdowns.

According to Google Trends, searches for 'good news' have reached all-time highs on Search.



1. (n.d.). COVID lockdown is world's biggest psychological experiment | World Economic Forum. Retrieved from <https://www.weforum.org/agenda/2020/04/this-is-the-psychological-side-of-the-covid-19-pandemic-that-were-ignoring/>
2. (n.d.). Google searches for "good news" are at an all-time high - 9to5Google. Retrieved from <https://9to5google.com/2020/04/14/google-search-good-news-trend/>



LITERARY RESEARCH

CARE FOR MENTAL HEALTH IN A LOCKDOWN

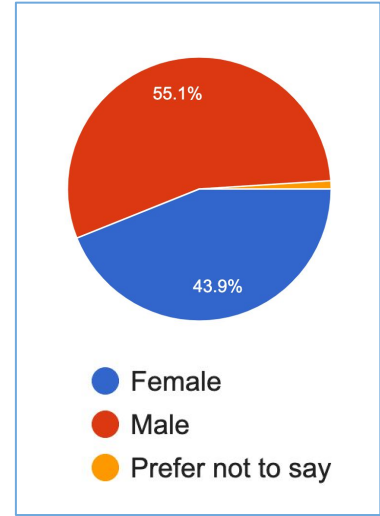
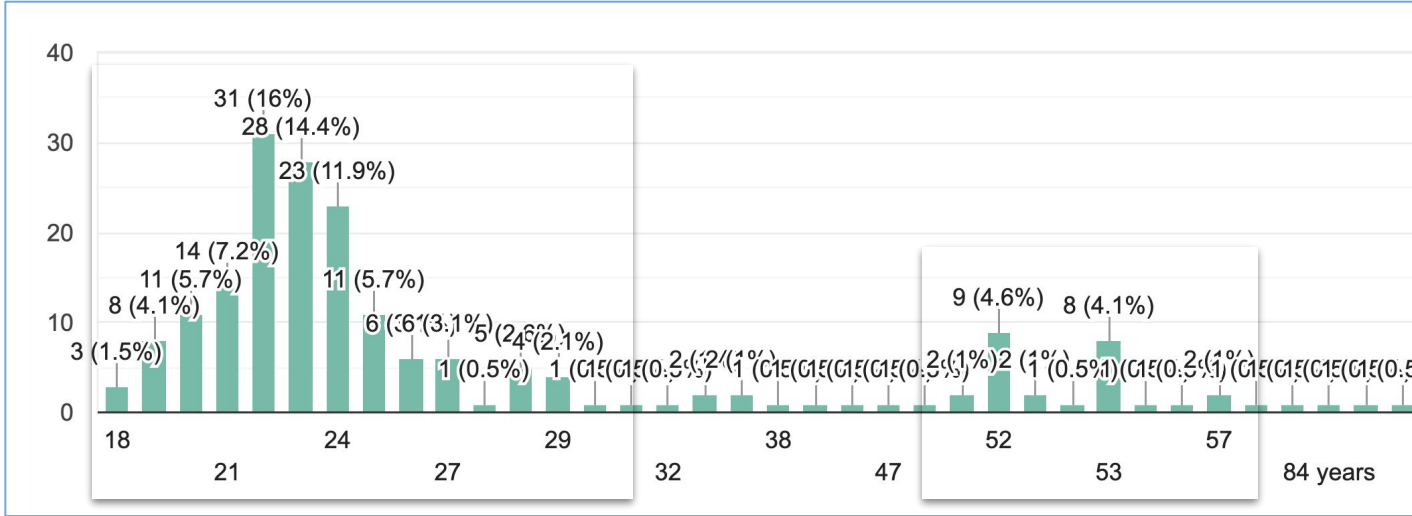
1. We need to stay informed by trusted sources
2. Staying connected with your family
3. Keeping your daily routines
4. Practicing habits that are relaxing
5. Seeking practical, credible information



(n.d.). COVID-19: Experts share insights on managing mental health | World Economic Forum. Retrieved from <https://www.weforum.org/agenda/2020/03/covid19-coronavirus-mental-health-expert-insights>



QUESTIONNAIRE: SAMPLE SPACE



Data collected from 198 anonymous responders with spikes in the age groups: 18-30, 50-60 with equal representation of both men and women through a Google form.

[Link to anonymously collected data \(click here\)](#)



QUESTIONNAIRE: TOPICS COVERED

1. Experiences in lockdown
2. Issues in lockdown
3. Advantages in lockdown
4. Methods deployed to stay motivated
5. Difference in lifestyle associated with changes in lockdown
6. Mental/ Physical distress
7. Coping methods

Responses collected: **198**

[Link to questionnaire used \(click here\)](#)



QUESTIONNAIRE: BIAS REMOVAL

1. Questions were **generalised**, the term “Mental health” was removed to avoid biases associated with it.
2. Questionnaire was circulated at public domains and required no identifiable information to maintain anonymous participation and **uncensored honest insights**.
3. The project was not introduced, a very **vague title** like “Understanding life during lockdown” was used to disassociate any negative or positive associations.
4. Language was **non-suggestive**, questions were open ended and not leading.

Title used for Questionnaire: **Life in
Lockdown**



QUESTIONNAIRE: ETHICAL DATA

1. Before attempting the questionnaire a **trigger warning** was provided
2. **Anonymity** was maintained, even we were not aware who the data belonged to
3. No questions were compulsory and **participation was optional**, participants only had to share what they were comfortable with.
4. Sensitive topics associated with mental issues were **not instigated**

Introduction to questionnaire

As the current situation has forced every one of us to stay indoors it has impacted our lives in various ways. Through this short survey, we would like to understand how lockdown has affected your daily life.

Please spare a few minutes and try to answer as honestly as possible.

Disclaimer: We understand the lockdown has brought on unprecedented distress on our mental and physical health. The following questions are related to those stresses, please consider continuing only if you feel comfortable.



INTERVIEWS

1. Out of 198 people participating in the interview, **40 people** chose to share their contact details with us for a telephonic interview. For the expert interview, psychologists, therapists, counsellors were interviewed through a video call.
2. Interview questions were **pre-scripted** but presented in conversational format
3. Before each call, **trigger warning** was given, **anonymity** was promised and **permission to record** was taken.

[Link to script for interviews \(click here\)](#)

[Link to recording of the interviews \(click here\)](#)

DEFINE

ANALYSIS DEPLOYED

PERSONAS



Basic personas we encountered, their pain points, aspirations, Psychological needs

INSIGHT CLUSTERING



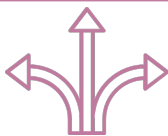
All insights are clustered and each cluster is given a suitable title that defines our top finding/ insights from our research.

TOP FINDINGS



This includes the most common issues notified by users, experts and literature present.

OPPORTUNITY AREAS



Domains that will align the best possible solutions as they are urgent, high impact or more holistic.

DESIGN PRINCIPLES

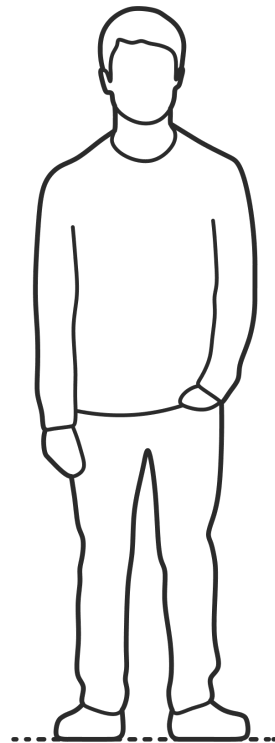


The various ideas that will make the solution suitable to the target audience, market trends and pre-existing design constructs.



PERSONA: HARMAN DIKSHIT

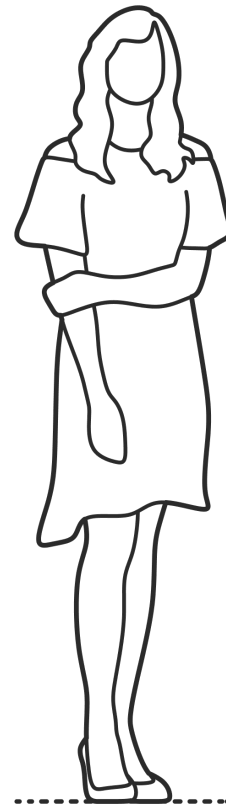
1. **Profile:** Unemployed
2. **Demographic:** 24 years old
3. **Pain point:** Wasting time on social media, Online content. He cannot socialize with any friends or family.
4. **Feelings:**
VALUES: Upskilling, productivity
WORRIES: Unemployment
INFLUENCES: Family financial burden
5. **Psychological needs:** Connectivity, significance





PERSONA: RITIKA SAHU

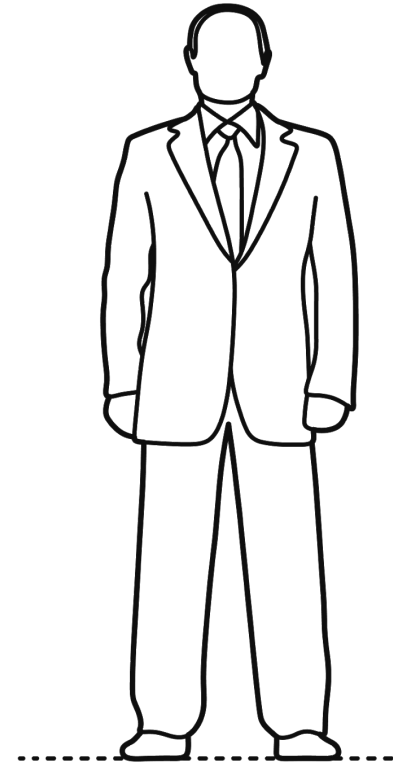
1. **Profile:** IT professional
2. **Demographic:** 32 years old
3. **Pain point:** Increase in mental stress due to work pressure
unable to find ways to relax
4. **Feelings:**
VALUES/ GOALS: Improving Work - life balance
WORRIES: Personal health being affected
INFLUENCES: Work pressure
5. **Psychological needs:** Growth, Certainty

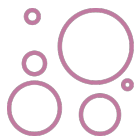




PERSONA: SANGAM TIWARI

1. **Profile:** Manager
2. **Demographic:** 52 years old
3. **Pain point:** Worried about kids health and well being as current news show a lot of negativity.
4. **Feelings:**
VALUES: Family time
WORRIES: Socialization with family and friends
INFLUENCES: Kids
5. **Psychological needs:** Certainty, Significance





INSIGHT CLUSTERING

Various insights collected were categorised into 7 different clusters for further study and analysis.

Schedule

Irregular schedule (eating habits, sleeping, work + life)

Motivation

No immediate goals
lot of free time being wasted
Failed plans
Loss of job
Cannot figure out current situation

Media

Blind consumption of media
Excessive media consumption
Exposure to fake news
Exposure to Bad news
Increase in screen time
No Entertainment
Information overload

Social

Isolation
No Physical Realtion (Only Virutal relationships)
Limited emotinal support
Limited socialisation
Limited Privacy
Home Sick
Worry for the closed ones

Misc

Loss of freedom
Stuck with same person
Uncertainty about the situation

Work

Loss of jobs
No proper Workplace
Being forced to do extra work coz of few resources
No work life balance
Managing Office Work and Home work
Bad financial situation

Health

Exposure to artificial light
Sedantry life style (no physical activity)
Interruption of exisiting medical services
Trauma about loss of life

[Link to categorised insights \(Click Here\)](#)



TOP INSIGHTS

Various statements that gave light into the urgent issues.

"My family is constantly **paranoid** due to watching covid news then they make me **agitated** as well by constantly talking of it"

NEWS

"I fall in trap by changing my routine i.e. **sleep late and get up late** etc... that really has its negative effect on the body"

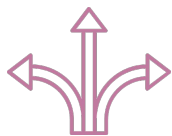
SCHEDULE

"Made it more difficult in temporary **escaping** from the problematic situation and felt **bounded** at home. Never felt so **negative and helpless**"

MOTIVATION

"Being a graduating year, this lockdown has been **very cruel** to our batch in many ways . **Emotional imbalances** and **stress**"

SOCIAL



OPPORTUNITY AREAS

Through both user and expert interview we highlighted the following domains that are urgent and need interventions. Marked ones were problems we further developed upon.

Motivation ●

Lack of motivation

News ●

Exposure to fake news

Exposure to negative/sensationalised news

Health

Awareness about their own problems ●

Trauma about loss of life

Social

● Isolation

Limited emotional support

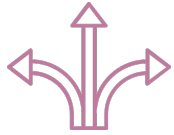
Uncertainty

Uncertainty about the situation

● Worry for the closed ones

● **Schedule**

Circadian rhythm



OPPORTUNITY AREAS

The various domains to develop upon as cited by mental health experts as being urgent areas of intervention:

1. Tools to help **relaxation**
2. System that promotes **schedule** following
3. Filter/ monitor of **media** content consumed
4. Avoiding **negative news**
5. Realising incorrect or **fake news**
6. Tools that help **socialise**





DESIGN PRINCIPLES

These will be constraints to our ideation, include:

1. Should not disrupt lifestyle
2. An aid not a crutch
3. Should be holistic for the family



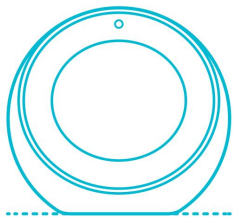
IDEATE

IDEAS BRAINSTORMED-1

SCHEDULE

MULTI MODAL SCHEDULER

What if you could experience your tasks?

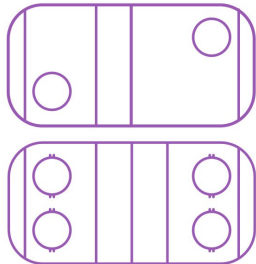


- Customise sound and light wrt to tasks
- Plays songs to associate with a mood and sets ambience of the room for efficiency

SOCIAL

INTERACTIVE SOCIAL GAME

Living with your family or friends? Let's have fun



- Games to help socialise with your family members
- Involve your imaginations

Rough brainstorming

D | Track People - Provide AI based solution → Fun ways
Stage 1 - Nudges, suggestions
- provide suggestions

Stage 2 - External Motivation { Peer pressure }
(include gamification) → Rewards ↑
Punish ↓
* Buddy System

Rewards

- Coupons
- Cash
- Art
- QR code

Punishments

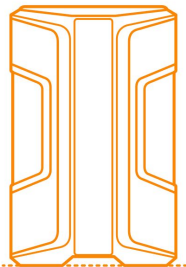
+ Social Shaming
+

Co-workers should be aware of your
Schedule (like cooking/bathing)

Personal schedule automatically updates

IDEAS BRAINSTORMED-2

MOTIVATION

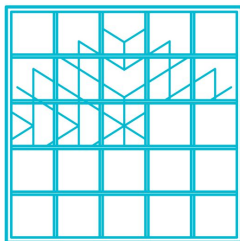


TIME CAPSULE FOR QUARANTINE

Care for a nostalgia trip after the lockdown?

- Write letters, put gifts, etc. for your future self to recover later
- Remember the time of lockdown by accessing the capsule

SCHEDULE



SCRATCH CALENDAR

Need motivation for your tasks? What's better than rewards

- Scratch to reveal illustrations on every task completed
- Complete task for a month and scan QR code for rewards

Rough brainstorming

Role model profiles - Define default profiles of eminent people

Ex - Elon Musk schedule

- Tata schedule

Pokemon Go - Complete a task for a virtual gift -

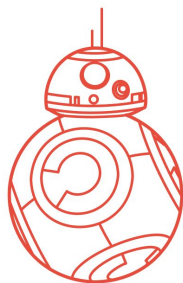
Complete common goals with buddies - Have fun and learn new things

Passport - Include complete tasks and achievements in a common place

Send Personalized Message - 'Quotes etc' to users when they don't complete tasks

IDEAS BRAINSTORMED-3

HEALTH

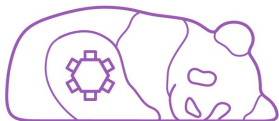


COMPANION ROBOT

Merge technology with the cuteness of a pet

- Cries and needs attention if using social media for long hours
- Takes you out for walks to ensure physical fitness
- Acts as a companion when feeling lonely

SOCIAL



DIY HAPTIC TOY

Miss your loved ones? Need a hug?

- Kit box can be retrofitted in any fluffy object
- Sensory feedbacks when nudged by loved ones

Rough brainstorming

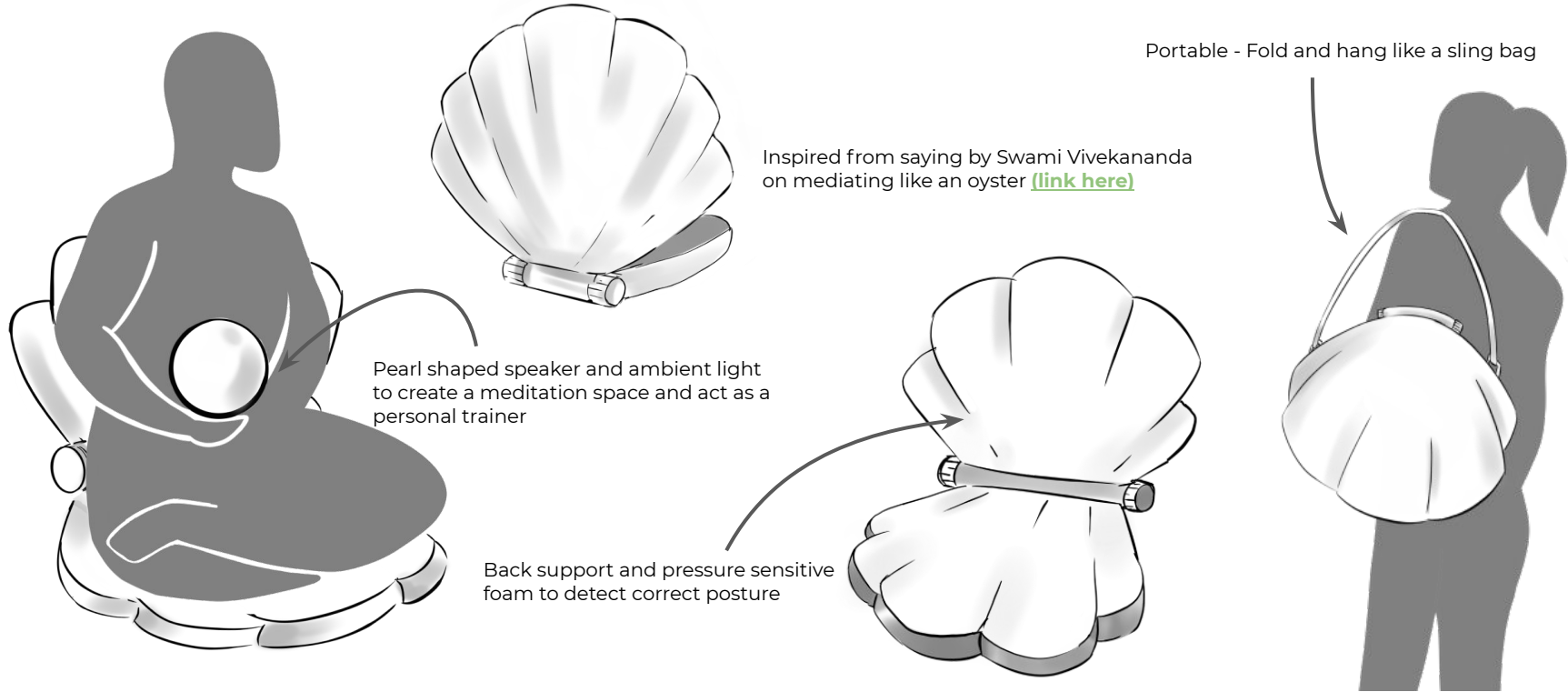
— Add bits of info into the schedule to self develop

Physical hourglass - Remind about passing of time

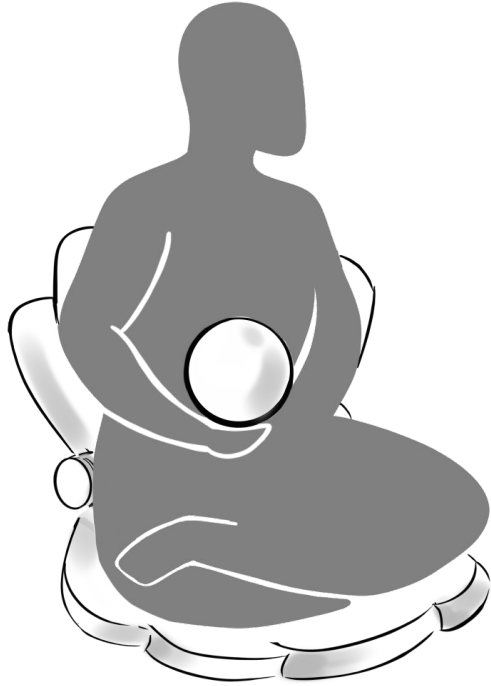
Song playing device - Plays different songs depending on the time/schedule
— Helps associate music with tasks

Game based app - Generates random tasks and reward once completed.
→ Philips Hue - Associate colours to tasks (Smart lighting system)

CONCEPT 1: THE OYSTER MEDITATION CHAIR



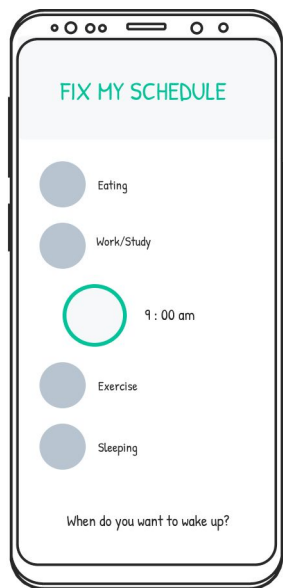
CONCEPT 1: THE OYSTER MEDITATION CHAIR



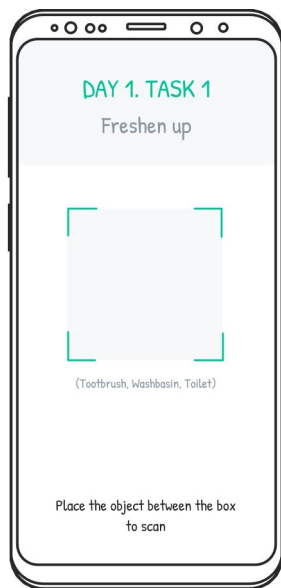
1. **Relaxation** ambience and guidance for **mental health**, helps people trigger the parasympathetic nervous system, which in-return **avoids panic attacks** and regulates flow of hormones which are important for **immunity** especially being the only weapon against COVID-19
2. Portability and lower back support allow user to carry and utilise this nook in areas lit with sunlight, perse the balcony during the lockdown. Sunlight and change in posture also regulates happiness hormones. These not only make user happy but promote **motivated** work cycles and therefore help regulate the circadian rhythm of the body and aids in maintaining a **schedule**.

CONCEPT 2: THE SCHEDULE APPLICATION

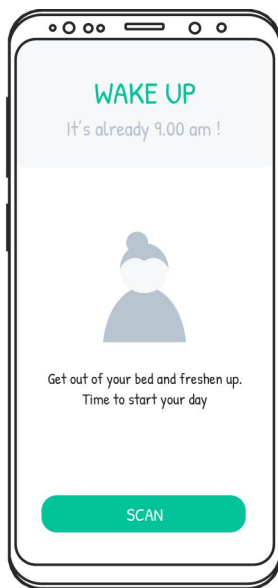
Using image recognition to gamify **schedule**, using quizzes to **assess mental health** and **rewarding** with stamp in virtual passport. Uses **mom**-like interactions in regional language.



Customised Schedule



Task scan



Motivating character

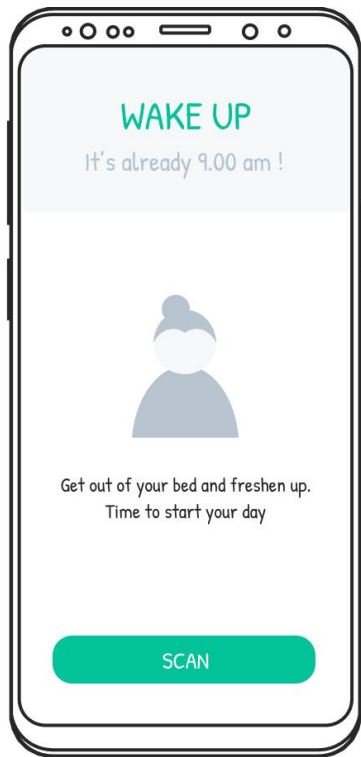


Virtual passport reward



Mental health test

CONCEPT 2: THE SCHEDULE APPLICATION

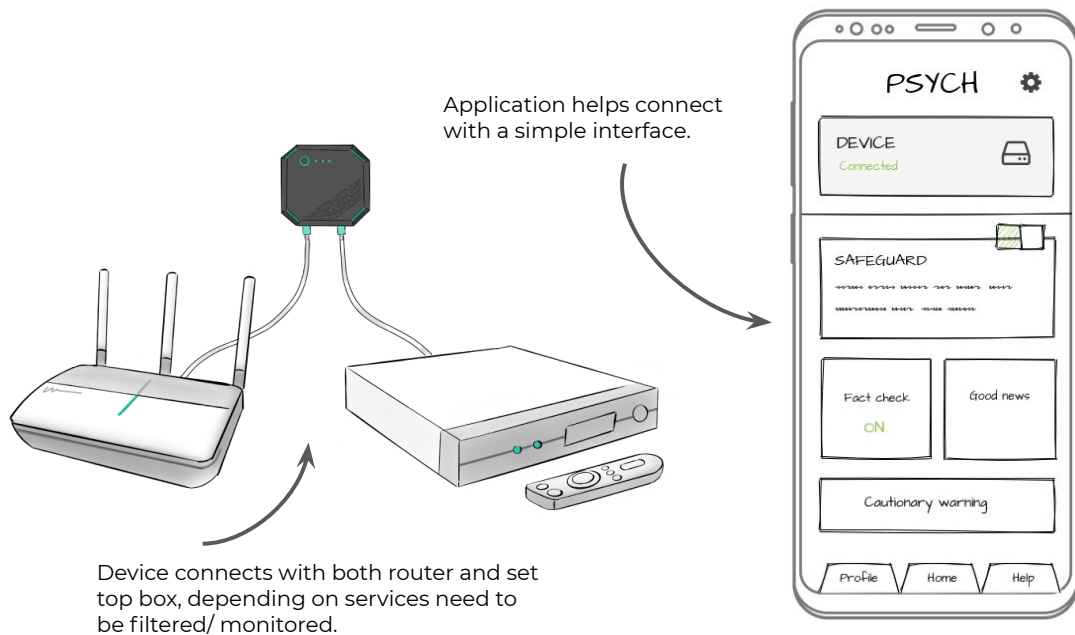


1. Early morning wake up call with a virtual mom is great from people in **isolation** struggling to maintain a positive **schedule**.
2. The gamification further **motivates** user to take pictures of items to complete tasks eg: Snap toothbrush to indicate you are out of bed and have brushed.
3. The monthly **mental health** quiz helps gauge and indicates to loved ones incase of any anomaly.
4. All tasks completed are **rewarded** by a stamp in the passport, which can be further exchanged with other incentives.

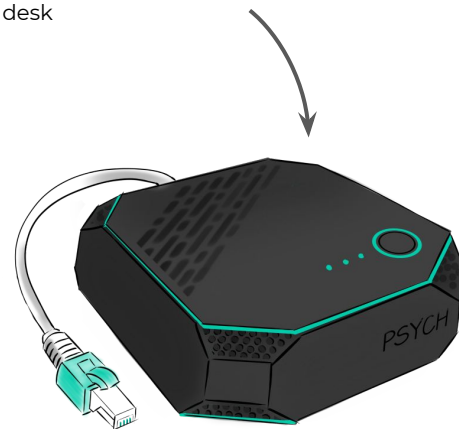
MAKE

CONCEPT 3: PSYCH GUARD

A holistic approach to protect you and your family from negative news, unnecessary content and fake information.



Geometric futuristic device, lights up in the dark and can be hung on the wall or kept on a desk



SCENARIO

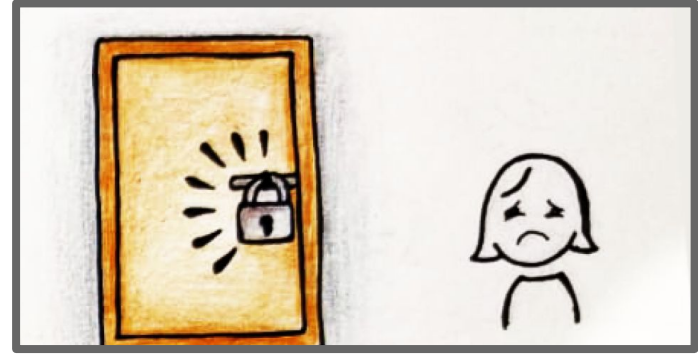


Ritika is feeling a lot of mental stress during this lockdown season.



In stress her body activates the fight or flight mode.

She cannot fight with her family who she loves deeply and is dependent on.

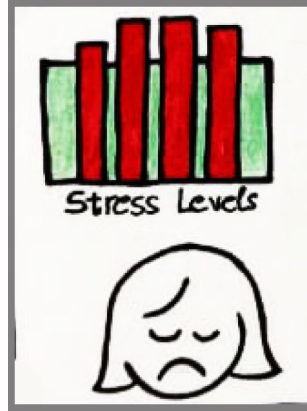


She cannot choose flight either since she is under a lockdown situation.

SCENARIO



This leaves her with the only physiological reaction; “Playing dead” which intensifies to mental illnesses like absenteeism and depression.



Her stress levels are further instigated by...



Constant negative content on news channels constantly

SCENARIO



Fake and sensationalised news shared through messages that create great panic

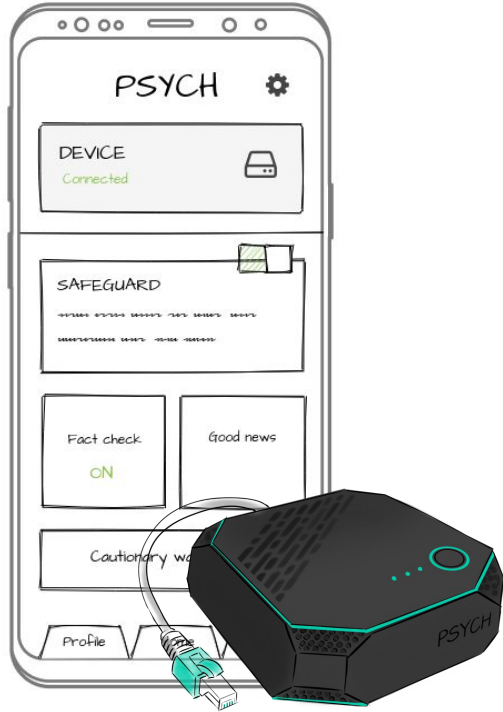


And she indulges in a lot of social media content which further worsens her stress conditions



Through the use of **Psych Guard** she is able to keep additional stressors at bay at the click of a single button.

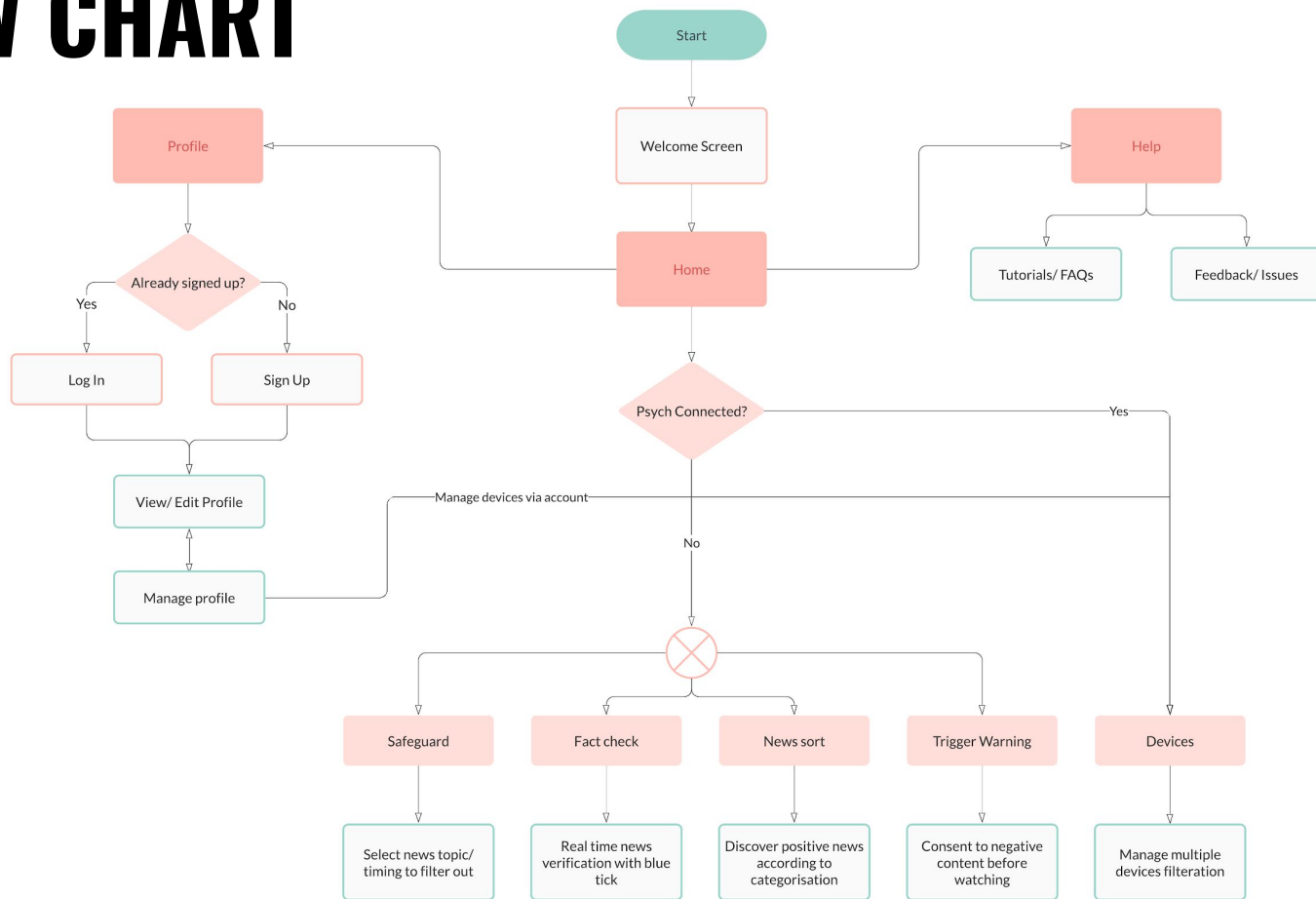
CONCEPT 3: PSYCH GUARD



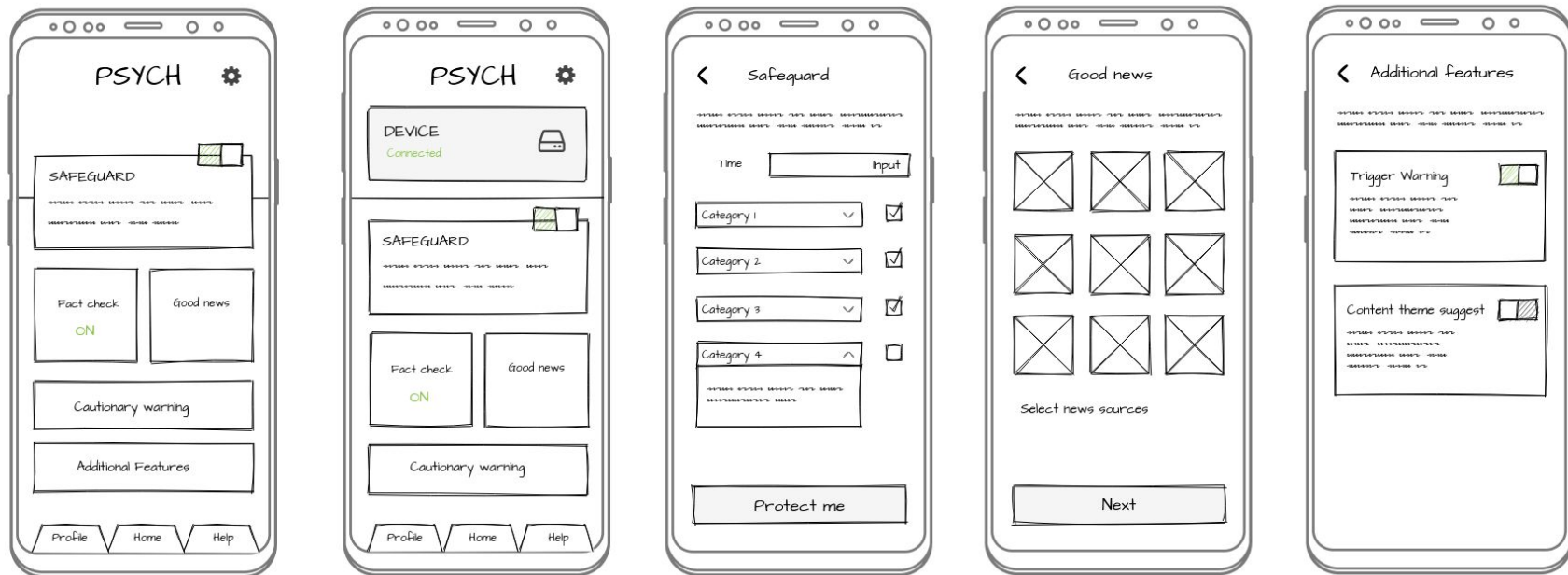
On connection of device with the router and set-top box of the tv you will be able to **control the information** you wish to see through the mobile application that comes along with this.

1. Avoid **information overload** with COVID news on news channels, social media, etc through the safeguard feature
2. **Fact check** the information forwarded through messages and avoid the spread of news without any authentic source.
3. Filter a collection of **positive news** to help relax your state of mind
4. Give **consent** before viewing posts containing sensitive topics
5. Application helps **protect your mental state** to avoid panic, paranoia and undue distress.

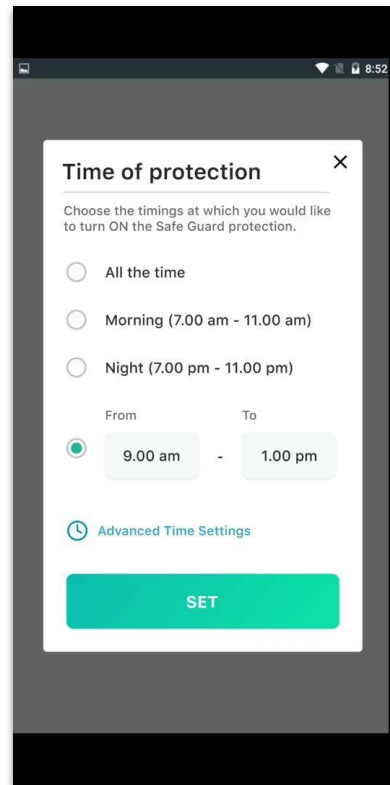
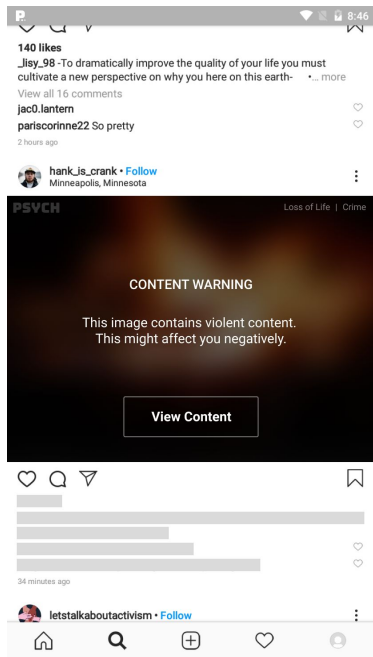
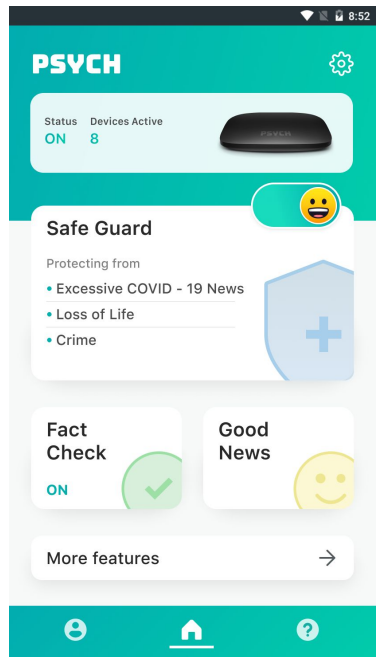
FLOW CHART



MOCKUPS



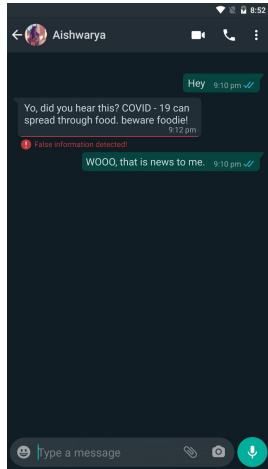
PROTOTYPE



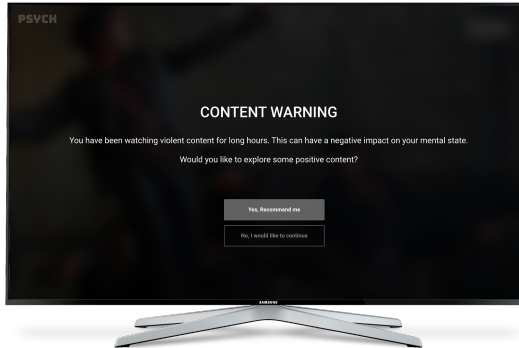
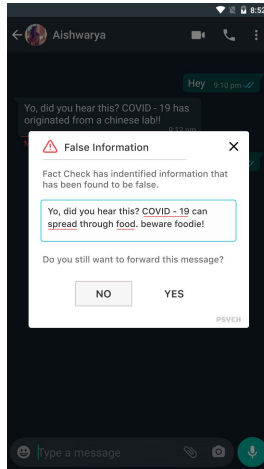
[Link to demo video \(Click Here\)](#)

PROTOTYPE

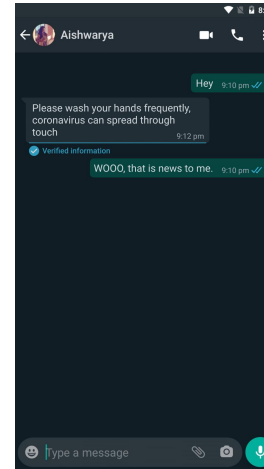
[Link to explainer video \(Click Here\)](#)



Unverified message forward



Content recommendation



Cross checked messages

IMPACT



Along with the rampant news we also see cases of a lot of fake news



Such negativity and unreliability creates paranoia, stress and misinformation in people



Poor mental health impacts hormonal production and thus immunity. Immunity is crucial during these times as it is the only weapon we have against COVID.

EXECUTION & VIABILITY

Your router functions as the choke point where all the Internet traffic for your network flows through. Setting up the **Psych Guard device** here will allow you to connect to the **Psych Guard interface** that will then help you perform web filtering for all the devices on your network — computers, smartphones, tablets, and even game consoles with built-in browsers, similarly in the case of the set-top box, helping you avoid news channels casting any negative news.

Control over the news can **reduce stress levels**, authentication of news can help **reduce panic/ paranoia and irrational fear**, and having the option to view good news can be a **great relaxor** which would in-return stimulate the parasympathetic autonomic nervous system to regulate hormones and even strengthen immunity.

In these times immunity is our only weapon against the Coronavirus, so a **healthy mind is important to stay safe from COVID!**

FUTURE SCOPE

1. Data collected was **limited to a strata of society** due to our inability to conduct one-on-one interviews
2. **Testing** was not conducted due to isolation
3. **Technical conceptualisation** was not done as team did not have enough time to generate prototypes
4. Due to **sensitivity of issue** various domains were not openly investigated
5. Since all conversations were **virtual**, there was a lacuna in empathy building and flow in conversation that happens in meeting physically.
6. **Stigma** of mental health is also a barrier in open discussion of such issues, more work needs to be done for the same
7. In future the application could cater to a **larger spectrum**, however for now our research was only limited to the target audience as specified.
8. **Virtually** conducting meetings had multiple limitations of bandwidth, schedules and intangible note taking

THANKS!

HOPE YOU'RE HEALTHY & SAFE

This entire project was completed through virtual interaction, no physical contact was instigated.

QUARANTEAM 2020

