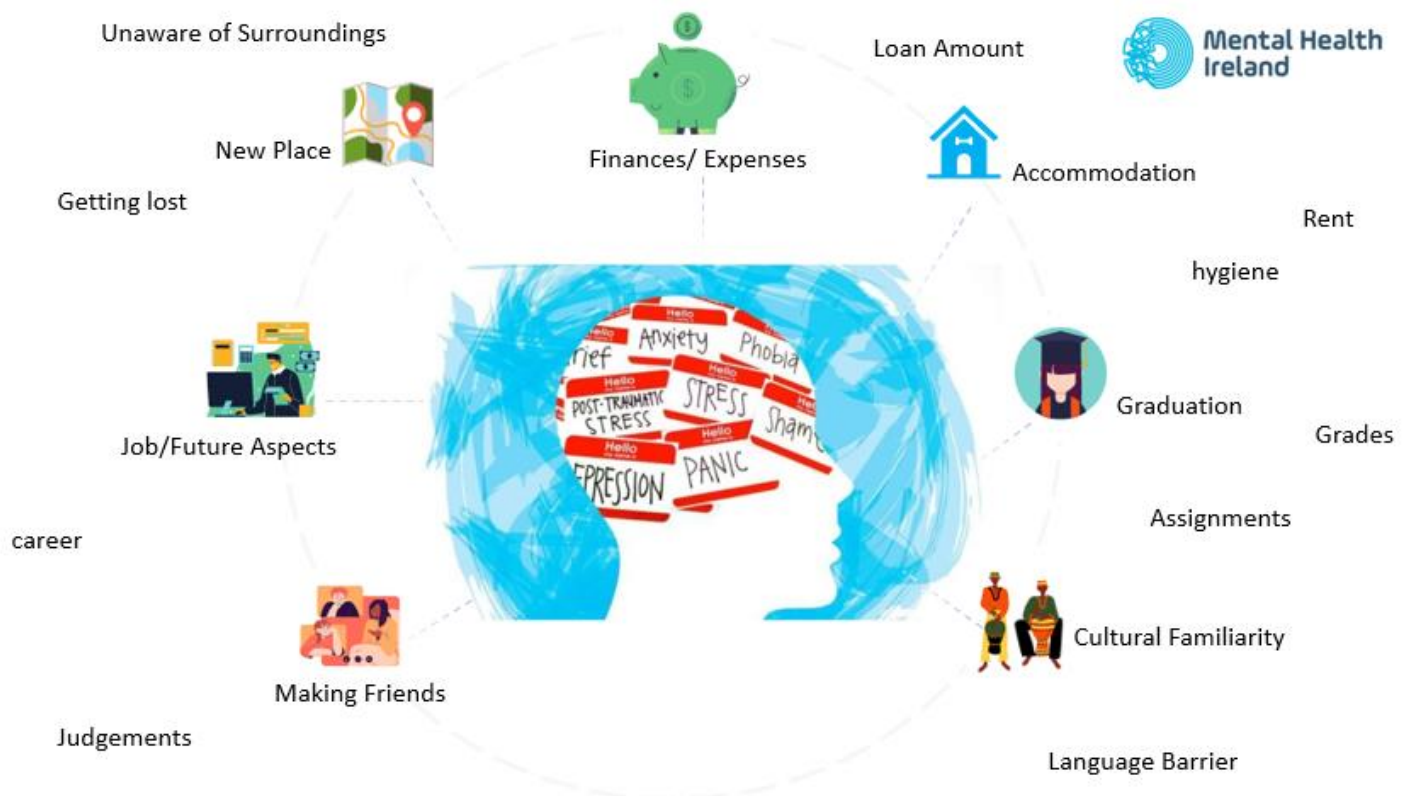# DESIGN

Design

DESIGN PROBES
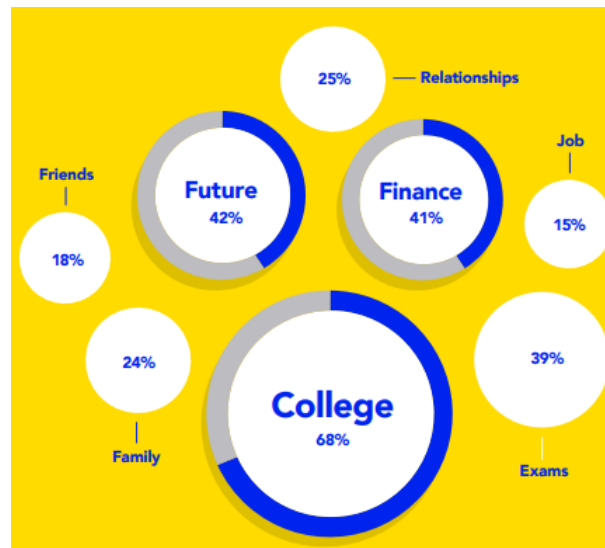
ASHOK KUMAR RATHOD

Introduction

The topic chosen for this project is mental self-care, with a special focus on international students. The rationale for this selection is explained as follows. Studying abroad takes courage. It requires young people to jump into the unknown. Students from all over the world migrate to an all-new place in pursuit of their education and start living in a place where they have never lived before. Moving into a new place is coupled with a series of challenges such as, finding a suitable accommodation, performing errands and chores, becoming culturally familiar with the locals, managing studies along with working part time to achieve financial stability, language barriers etc. As per an Irish news article, frauds, high rent, and no accommodation are some of the problems being faced by international students in Ireland. (*thejournal.ie, 2017*).

The multiplicity of these concerns and events often contribute to stress levels of students. According to European Association of International Education (EAIE), as a result of these multiple stressors international students are particularly vulnerable to developing mental disorders such as anxiety, panic attacks, stress etc. In the context of the current times in the pandemic, students may experience heightened stress-levels as the existing challenges are now expanded with the addition of loneliness and social isolation, as we are confined to our homes. Another news article reports woes of international students and quotes one such student who shares how the student is mentally affected by sleeping, working, and eating in one room and paying thousands of euros without any access to campus. (*Mannion, 2021*) In order to deal with this, students have resorted to digital modes of communication, but it does not match up to the experience of real interactions.

Factors affecting mental well being

Relationships — 25%

Future 42%

Finance 41%

Friends 18%

Family 24%

College 68%

Job 15%

Exams 39%

PCHEI : My world survey 2,2019 & USI student Mental health survey,2019

Therefore, it is important for students to consider the conscious management of their emotions through mental self-care. Mental self-care can be performed by participating in various activities that have a therapeutic effect; whether it is playing sports, cooking, meditation, or doing yoga, it can be achieved by doing the things you love doing in order to make yourself calm and relaxed. Such activities have proven to be a stressbuster and a respite from the harsh realities of life. There are many areas under the umbrella of mental self-care, such as *Emotional* care. This involves engaging in activities that help individuals connect, process, and reflect on a full range of emotions. E.g., seeing a therapist, creating art, journaling your thoughts. *Physical* care can also be considered a way of enhancing one's mental well-being. For instance, regular exercise and getting enough sleep is known to boost mood. *Practical* care requires being cognizant of your realities and identifying areas for optimisation to enhance your overall well-being and prevent stressful situations in the future. For instance, creating a budget or taking up professional development classes. *Spiritual* care involves engaging in activities that nurture your spirit and lead to higher self-awareness. E.g., meditation, yoga, nature trails. *Social* engagement is another form of mental self-care, which enables individuals to nurture and deepen relationships with people in their lives. For instance, going for a brunch, calling your loved ones regularly. All these engagements have an impact on your mental well-being and possess the capability to reduce stress levels and enhance your mood.

With the application of certain design probes, I hope to gain insights from international students on the factors and circumstantial situations that cause stress, anxiety, and paranoia et al as well as an understanding of the current coping up mechanisms that students apply to combat stress in their own ways and find new ways of mental self-care. These design probes are created in a gamified manner to seek natural and candid responses from users.

State-of-the-art of Mental Self Care

The current technologies in place that facilitate mental self-care include using chatbots, robotics that are programmed to talk to humans, immersive technology, augmented reality/virtual reality, internet-based help groups, on-demand self-care such as books and journals to access from clouds, meditation apps, etc. Some of these are explained below.
(*References: Click the links provided*)
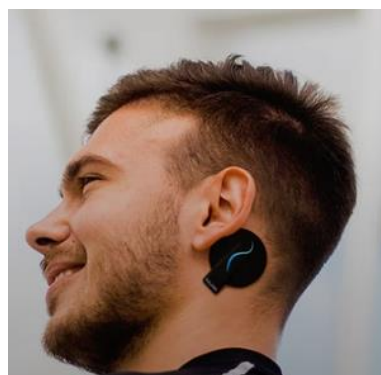

Pepper : The Robot Care Home, PK News

Healium : Oculus

ZeeQ Pillow Sleep Moderator

Headspace

BrainLink Lite EEG Headband

Feelzing -Neurostimulation

Cove: Stress Cancelling Technology

Snugvest – Wearable Technology

Healium- AR

ExploreDeep Meditative game controlled by breathing

AI powered chat-bots and other apps

There are many apps designed to support those struggling with their mental health. Some of them employ artificial intelligence to provide emotional support. These are also termed as Emotional Therapy Chatbots. Chatbots are such apps that can act as a much-needed conversation partner and combat loneliness.

For instance, apps such as Wysa and Youper provide this functionality. Wysa supports those with depression, stress, anxiety, and a range of other wellness needs and acts as a intelligent chatbot that reacts to emotions expressed by users.
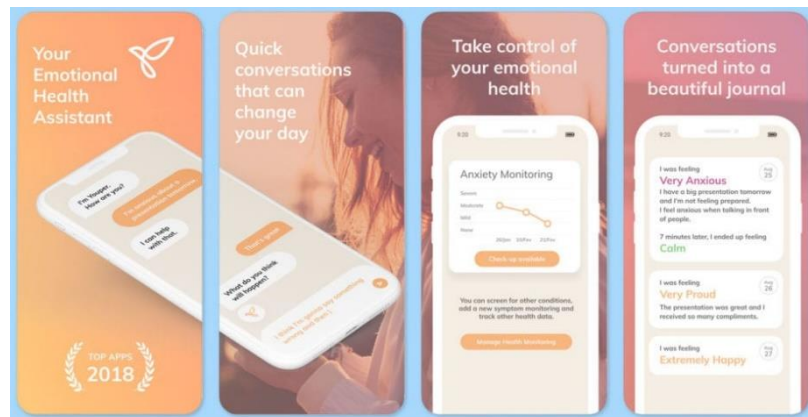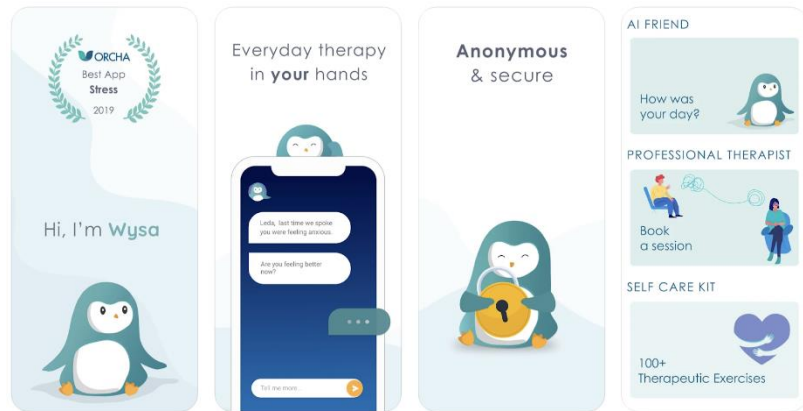
It must be noted that meditation and mindfulness apps such as Headspace and Calm have grown in popularity over the recent years. The products that positively impact loneliness will be the ones that deliver highly personalised experiences for users, by leveraging technologies like AI, big data, and biofeedback.

Robotics

It is now possible to have robotic companions as a solution for improving the psychological well-being. With innovations in artificial intelligence, personal robots will become increasingly sophisticated, offering contextual solutions by adopting traits and habits required to match the specific user needs and personalities.

For instance, Intuition Robotics employs artificial intelligence to create personalized companion technologies it has created ElliQ, which is a digital home companion. It possesses the capabilities to respond to questions, make calls and book appointments. Further, it assesses the user's environment and provides entertaining activities as well as activities that lead to mental well-being.

Another example is that of PARO, a therapeutic robot developed by AIST, in the form of a baby seal. It is commonly used for patients with dementia, whereby sensors enable the robot to recognize the user's environment, sense being petted, and recognize voices and words. It has known to reduce patient stress and that of their caregivers.

There is a growing trend of applying immersive technologies to elevate mental health. For instance, Alcovevr is a virtual living room curated by the AARP Innovation Labs to bring international and intergenerational families together to play games, watch videos, and forge memories.
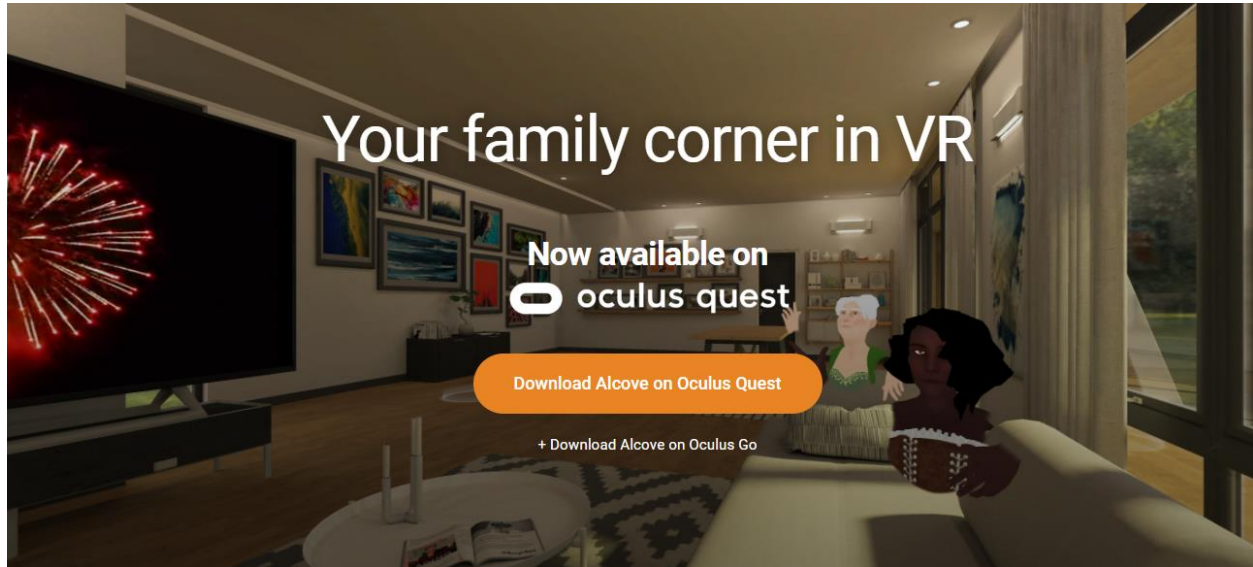
Hang out with friends and family and catch up on the couch in your own virtual home

Take a cross-country road trip, ride in a hot air balloon, and explore the depths of the ocean

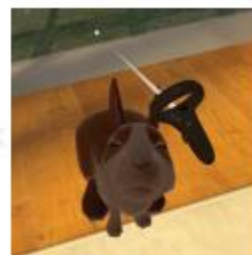Grab a friend to play checkers or keep your mind engaged with brain games

Follow or lead other users

Guide friends or family who aren't yet comfortable using VR around the house and into experiences

Join experiences together

Join friends and family in a hot air balloon over the Swiss Alps or listen to the same concert together

Play with your own pet rabbit

Dress up your pet bunny with hats, play fetch, or chase it around the house

"Rendever" is another example of a VR platform that is targeted at older adults experiencing loneliness, which leverages neuroscience to perform activities for mental stimulation, socialisation, and therapy.

Limitations of self-care :
- One might lack the perspective to properly understand the nature of their issues.
- One might lack the knowledge on fixing their issues.
- One might lack the motivation or will power to stick to a plan and do things.

Future possibilities- Digital phenotyping
Another recent and exciting development is "digital phenotyping". This involves harnessing data gathered from people's personal devices - such as smartphones and wearable devices - to learn about their behaviors and overall state of health. Research is ongoing to understand how new sources of data, including the number of hours someone spends looking at their phone, their geographical information, and the way they "click and tap", can be turned into valuable clinical information. It could help recognize those at higher risk of relapse and intervene before their symptoms worsen.

Target Audience for Mental Self care

According to Minister Harris, the leading issue for young people in Ireland remains concerns about mental health. (gov.ie, 2020). It is aimed to explore the area of mental self-care by analysing the current coping mechanisms and activities that people perform with the intention of protecting their mental well-being. Further, it is also aimed to understand the causes of stress among international students.

The potential respondents for our research are international students studying in Ireland, both male and female, above the age of 18 years. In order to promote generation of a wide range of insights, different kinds of international students will be engaged with. The types of international students that will be chosen are as follows. This includes international students currently living in Ireland and pursuing their education, students who are based in their home country and studying remotely owing to restrictions, students working part-time and so on. The selection of distinct types of international students would unveil unique challenges faced by them as well as insights into their engagement into different activities of mental self-care.

In order to further gain diverse insights, different personality types will be recruited for the design probes, for instance, international students that are often found socialising as well as those that usually demonstrate shyness or aversion from social activities. Likewise, it would be beneficial to recruit students who demonstrate high levels of emotional intelligence and who often inspire their friends and colleagues to have a positive outlook towards life, as this would unveil some of the effective coping mechanisms and activities employed by these students to promote their mental self-care. The differences and multiplicity of experiences of those recruited should result in a greater variety of ideas and collaborative discussion.

As a member of the university clubs and societies, I plan to recruit people from on campus accommodations who are from various parts of the world. I would explain the prospective respondents about the activities and their expressions of interest towards participation and confirmation would be sought by digital modes of communication such as instant messaging. Once the materials and resources required for the probe are prepared, I will contact all those who are willing to participate, along with another brief overview of the purpose of the activity and the game itself.

Summary

The aim of this project is to explore mental self-care for international students. According to Minister Harris, the leading issue for young people in Ireland remains concerns about mental health. (gov.ie, 2020). While we are familiar with a variety of trends as well as technologies prevalent in the current times to practice mental self-care used in the area as discussed above, I aim to carry out a research to uncover in-depth insights on mental self-care in a range of areas. These can be enlisted as follows. Firstly, I would like to understand the current activities and technologies that international students engage with to protect their mental well-being and indulge in self-care. Secondly, I would like to identify the causes of stress among international students. Further, I would like to examine the impact of circumstantial situations and environmental factors on the mental well-being of international students. These diverse insights would lead to the revelation of current and future possibilities.

The motivation for the selection of the area mental self-care stems from the insight, as evident in the media and amongst local student communities, that international students are significantly affected by the COVID-19 pandemic. This is in furtherance to a series of stressors that already impacted them earlier, which are typically experienced when moving to a new location. It is found that owing to the advent of the pandemic, higher levels of stress were significantly associated with the students of international status. (O'Byrne et al., 2021). This is further validated by a Google Trends analysis, that revealed rapidly growing search volumes for the keyword "mental self-care" (see exhibit 1). Interestingly, the Google Trends analysis reveals that a related topic that is usually found in conjunction with mental self-care is students (see exhibit 2), which indicates that there is growing interest among students in this area in order to protect their mental well-being.
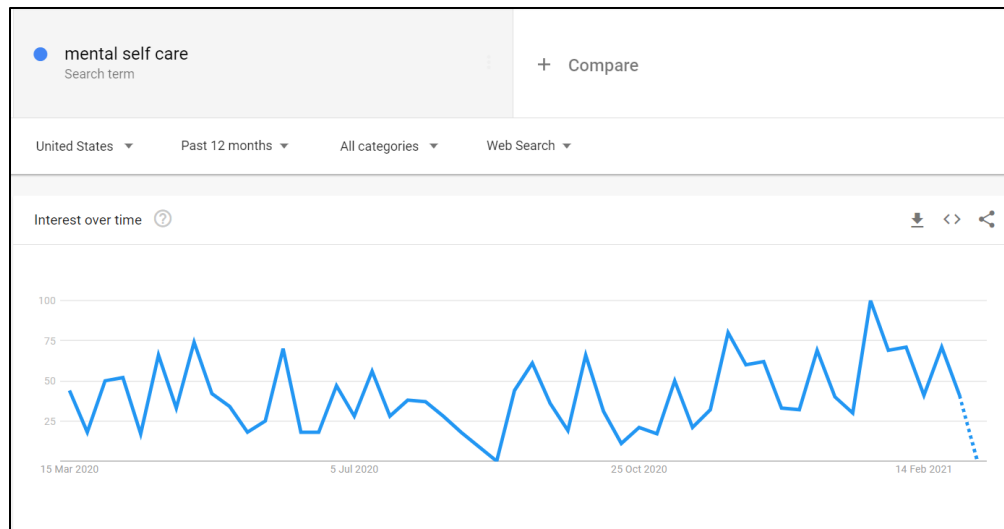
Exhibit 1 : Trends over Mental Self care

Exhibit 2:Trends Related topics

As discussed in the previous sections of the report, there are a variety of applications and technologies that have been utilized for improving mental well-being, for example, meditation apps, chatbots, immersive technologies et al. International students are also seen to be engaging in various activities for practicing mental self-care, as indicated in the latter section of the report that showcases a netnography study.

With an awareness of these trends, through employing design probes and performing a series of engaging activities, it is aimed at reimagining, recreating, and enhancing the experiences of practicing mental self-care, on the foundation of razor-sharp insights gained as a result of these probes. Through these probes, it is expected that the user's personal contexts and perceptions would be revealed, as argued by Mattelmäki, 2006. This would be helpful to unveil the mindsets of international students and how they view the areas of stress and mental self-care. Mattelmäki further opines that probes have an exploratory character and that they explore new

opportunities rather than solve problems that are known already. In this manner, the probes would help me identify the shortcomings of current practices of mental self-care in order to overcome them.

Selection of design probes

From my interactions with international students in the local community, it was often brought to light that students were experiencing the conditions of loneliness, paranoia and stress owing to the lockdown, coupled with the other challenges of being an international student such as financial and other constraints as well as adaptation to an all-new culture.

In order to gauge the current practices being employed by international students to practice mental self-care in order to overcome their pressing situation, I conducted netnography to identify certain patterns among international students that may indicate the activities they indulge in for mental self-care. The netnography study was carried out non-intrusively by researching Instagram accounts of international students, that showcased publicly accessible content and pictures. It is evident from the below exhibits that students often indulge in cooking, exercise, travelling, et al as ways to uplift their mental well-being and it is their way of practicing mental self-care.

Exhibit: A student from Dublin can be seen exploring the Dublin Mountains

Exhibit: A student from Limerick is seen indulging in preparing cocktails for leisure

Exhibit: A student from Dublin is seen engaging in exercise, by riding a bike to practice self-care

While the netnography indicates the 'what' i.e. the activities people indulge in for practicing mental self-care, it fails to explain the 'why'. In other words, it does not explain why people engage in the above activities and to what extent does the performance of these impact their mental health, nor does it reveal the shortcomings and limitations of these activities. In order to penetrate deeper into the psychology and behavioural practices of our respondents, the listed design probes were selected to uncover further insights.

The design probes selected are as follows:
- Participants are asked to relive memories from the past and share pictures of activities they love doing
- Participants will be asked to associate experiences, things and people with words provided to them
- Participants are asked to brainstorm solutions to achieve mental peace in a counter-intuitive manner
- Participants are asked to take pictures of elements from life that affect their mental health
- Participants are asked to sketch out places they have visited in the past that affect their mental health

Descriptions of the tasks/activities

Task 1:

In this probe, participants are asked to relive old memories by going through pictures and videos from their Instagram archives/Facebook feeds/Snapchat memories and similar social media accounts and are asked to share pictures that evoke positive emotions. This is expected to unveil what/who are the situations, people and factors that promote the experience of a range of positive feelings and emotions amongst respondents. They would be further asked to share reasons for engaging in these activities in the past and what is the frequency of such engagements by them in present times. This would help unveil whether the respondents currently have opportunities to experience a similar range of emotions or if they are unable to do so and therefore experience negative conditions such as loneliness.

Participants are asked to share these pictures with a hashtag #TDML (acronym for Trip Down Memory Lane) on their social media accounts, as people like sharing throwback pictures from the past and hence this would naturally fit into their current practices.

Task 2:
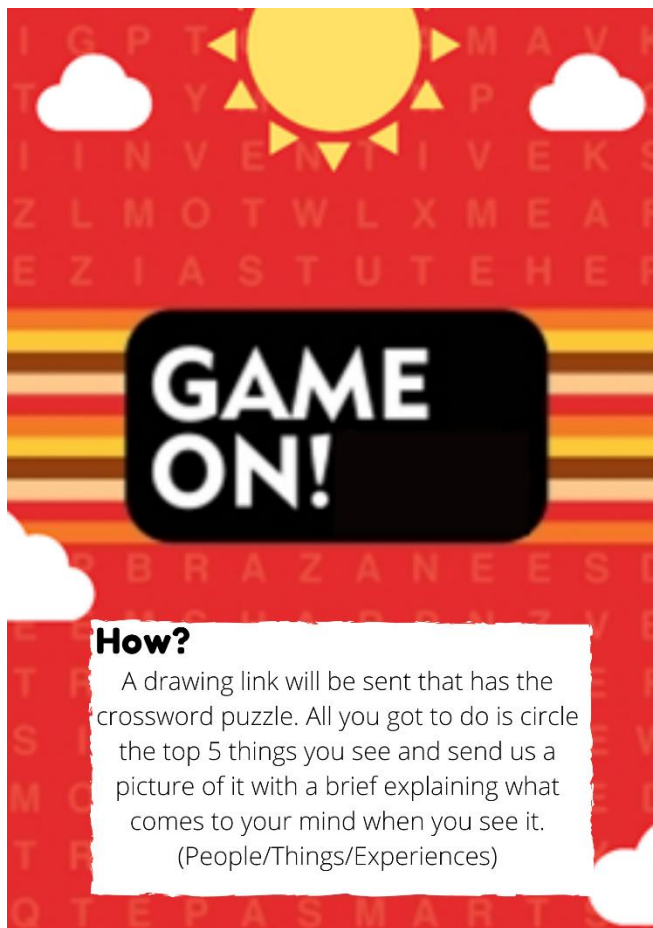
In this probe, each participant is asked to look at a cross word puzzle with different words hidden in it. Some examples of these words include 'stress', 'happiness', 'part-time job', 'lockdown', etc that are expected to evoke a range of thoughts and stimulate discussion. The respondents are asked to name things/people/experiences that comes to their mind when they see these words. This is expected to unveil their concerns and feelings that they experience as international students. For example, 'stress' could evoke a discussion from respondents regarding assignments or loans.

A link will be sent to the participants containing the crossword puzzle in it. The participant can then circle the first five words seen by them and saves the picture. The participants would be requested to send the picture to me via instant messaging app, upon which I would request them to share the thoughts coming to their mind then they see those words.

Task 3:
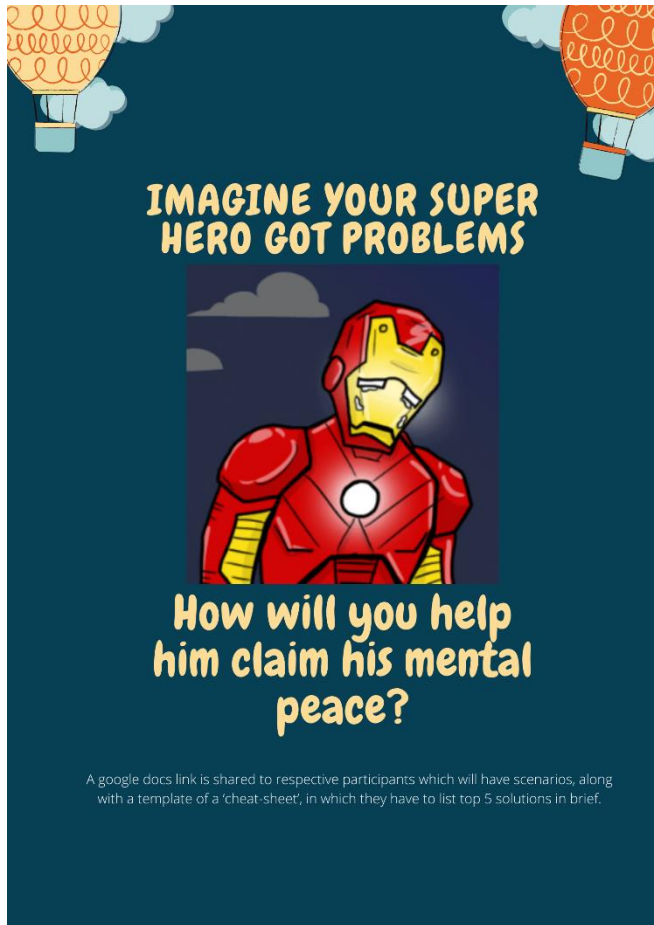
In this probe, participants will be given hypothetical problems and scenarios faced by their favorite superheroes, such as stress, financial concerns, loneliness, isolation, etc. Participants are tasked with creating a list of solutions (life-hacks or cheat-sheet) that the superhero could implement to cope with the problems. Often, people are likely to recommend solutions to others that work for them personally. Therefore. this activity is expected to unveil the current coping mechanisms and activities employed by international students to practice mental self-care as well as to cope with stress. They are also requested to brainstorm new ideas of thinking or sketching of tools/gadgets/ that can be invented or are in use to cope with mental well-being. A google docs link is shared to respective participants which will have scenarios, along with a template of a 'cheat-sheet', in which they have to list top 5 solutions in brief.

Task 4:

PHOTO JOURNAL

Take pictures of objects/technological artifacts available at your home, that you use to practice mental self-care. Further give it a name and explain why and send it through WhatsApp

In this probe, participants are asked to take pictures of objects/technological artifacts available at their home, that they use to practice mental self-care. Further, they are asked to give it a name and explain why. This is expected to unveil what are the solutions that international students have currently employed to cope with stress and disturbances and further why are these solutions working to their advantage.

Respondents will be requested to share their photos and given names on WhatsApp or any other instant messaging tool as may be found convenient to the respondents.

Task 5:

In this probe, respondents are asked to explain their life journey by listing out the places they worked at earlier or have visited earlier or studied at. Through a discussion with the respondents post submission of their lists, an effort will be made to examine the relationship between these places and their impact on their personal/social/work relationships. For instance, the impact of migrating to a new place on their relationships.

This activity would unveil the impact of circumstantial situations and environmental factors on their state of mental well-being. A template of a 'journey map' will be sent to participants, in which they have to post their submissions.

Expectations:

Through the design probes, it is expected to unlock insights surrounding themes outlined as follows. Firstly, it is expected to gain insights into the causes of stress that affect the mental well-being of international students. Secondly, it is expected that the respondents would help us uncover the current activities and coping mechanisms employed by them to overcome stress, loneliness, and a range of similar negative conditions.

Specifically, the probes are expected to shed light on the following areas:
- Whether the respondents currently have opportunities to experience positive emotions through activities that promote mental self-care
- Concerns and feelings that the respondents experience as international students.
- Current coping mechanisms and activities employed by international students to practice mental self-care as well as to cope with stress.
- Impact of circumstantial situations and environmental factors on their state of mental well-being.

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