



ARTIFICIAL INTELLIGENCE

(SECJ3553-10)

Title:

MOBOT - Mental Health Support and Motivation Bot

Lecturer:

DR. NOOR HIDAYAH ZAKARIA

Group Members:

No	Name	Matric No
1.	NURUL AQILAH BINTI AHMAD	A19EC0203
2.	NURUL SYAMIRA BINTI AMAT JIFRI	A19EC0145
3.	NURSYAHIDATUL ASYIQIN BINTI YUSOF	A19EC0140
4.	IRMA ZAFIRAH BINTI MOHD IKRAM	A19EC0054
5.	NOOR ARINIE BINTI NORHALIL	A19EC0121

Table of Contents

Introduction	2
Empathize	2
Describe the process of Define in DT	4
AI Solution and Goal	5

Introduction

Mental health refers to a state of well-being in which an individual realizes their own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community. Mental health is as crucial as physical well-being. According to Tan Sri Dr Noor Hisham Abdullah, a statistic shows a dramatic increase in the number of suicide cases reported in Malaysia throughout the COVID-19 pandemic. Moreover, 89.4 per cent calls which were retrieved by helplines were related to mental health issues that required emotional and psychological support.

With this information, we are proposing a mobile application with the main feature consisting of an artificial intelligence chatbot which is based on cognitive-behavioral techniques (CBT). This AI will provide mental or emotional support, guide users to self-manage stressors and recommend activities to improve users' well-being. However, this AI does not act as a professional psychiatrist. Hence, it cannot assist users with severe mental health conditions. It can only suggest that users seek advanced and professional medical help.

1. Empathize

Problem statement

The Covid-19 pandemic may have brought many changes to our life, altered daily routines, financial pressures and social isolation. Due to that during the Covid-19 pandemic many people may experience stress, fear, sadness and loneliness. Also, mental health disorders, including anxiety and depression, can worsen. These are the reasons for introducing MOBOT application as an mental health support for awareness to the patients.

Some patients do not have a good listener to tell them about their emotions. Most people think good listening is not talking when others are speaking, letting others know through facial expressions and verbal sounds such as “mm-mmm” and being able to repeat what others have said means that the listeners focus on what he/she is talking about. Listeners supposedly cannot

be passive because they should make the conversation a positive experience for the other party so that they will feel supported and convey confidence in them.

Other than that, patients might feel clueless about how to tone down their own emotions. As we know not all people can control their emotions, somehow it can harm themselves. Strong people also have their own limits where they still can feel depressed, unmotivated and in an unstable mood. In addition, they need something to help them manage their feeling to not be so emotional that can push them to do unexpected actions such as commit suicide and self-harm.

On the other hand, some patients need tips on how to look after themselves and the person they care for. Some people can not make their own decision where they often need encouragement from others before they can come to a right decision. By having this application, it will be great to help the patients by giving tips on what things that they should do.

Users

The targeted users for this proposed application are people who had an experience of undergoing treatment (post-treatment condition), the ones being diagnosed with mental illnesses especially anxiety and depression, and generally, the ones who want to seek tips in order to look after their mental well-being. Therefore, a **smartphone-based mental health application** represents a unique opportunity to these people at least to get quality mental health management outside of therapy.

Goals

Based on the user's problems and needs, there are a few goals the application could achieve. The goal includes a chat box, **journal and tracker, guides and motivation.**

- **Chat bot -** A chatbot is a piece of software that allows users to have a text-based online chat conversation. The conversation box provides a supportive presence to service users

and engages them with conversation at times when they feel at their lowest. Aside from that, chat bot also provides a friendly ear to the concerns, worries, intrusive thoughts or engage in 'therapeutic' small talk.

- **Journal and tracker** - When it comes to self-care, a user journey is a path that a user might take to attain their goal. The feature here will allow a user to keep a personal journal and track their mood on a daily basis. The system can also show users in recognizing their own patterns, so that they can improve themselves in order to heal.
- **Guides** - The guides are required in order to recuperate from specific problems. Therefore, the app will offer a variety of options for users which are ways to breath in calm, self-care, calming exercise, grounding technique, and awareness tips. This indirectly gives the opportunity for users to self-care themselves by following the guides.
- **Motivation** - The motivation features goal is to provide users with good positive words throughout the day. However, this feature is optional to the user whether they want to use it or not since some might find it really helpful to start the day with a nice quote and some don't. This feature could help users to encourage the soul to heal by positive affirmations and motivations.

2. Describe the process of Define in DT

Based on the findings and learnings of the problem faced by the users, it can be defined that they are in need of expressing and sharing their life problems but in a secret way. It is because of the discomfort of opening up to people, trust issues and the feeling of being judged if they let anyone know.

Other than that, the users need a professional guide and effective tips because they want to perceive the knowledge on how to control their emotions if it dominates themselves. The users require an emotion tracker so that they are able to sort out their thoughts, practice on

de-stressing and self-care. In addition, they are in need of motivational talk that gives positivity when they are down in order to keep going through their day.

3. AI Solution and Goal

Living in a technological era comes with a lot of advantages including increased awareness about health, particularly mental health. However, this rising awareness has not completely got rid of the cliché that linked mental illness and seeking professional health. This is because there are people who just need emotional support by expressing their feelings. However, they do not feel comfortable expressing themselves to their acquaintances. After implementing the first two processes of design thinking which are empathize and define, we can provide a solution for the case. The artificial intelligence solution we are proposing is a mobile application that provides chatbot and few other features that is centered on mental health care and is helping to change the cliché above.

The goal of the artificial intelligence solution proposed is to offer well-rounded support to patients and the public who are encouraged to set their mental health goals. With features provided in the application, they can get the keys to their mental health journey through chatbot, journal and tracker, guides and motivations. To emphasize, this solution is not to replace or revive mental health, but helps high-risk and low-risk users in terms of mental and emotional support.