

Which mental disorders?

Chatbots are effective in detecting certain mental disorders such as depression, anxiety, post-traumatic stress disorder, substance abuse disorder with good accuracy (see resources). Other chatbots can detect other disorders, but Happier will focus on these since they are the most common.

What psychology papers & visual designs?

We have listed several scientific papers about the accuracy of chatbots in detecting the above-mentioned diseases. Chatbots represent a new tool in the psychology field that can claim to help users, however in a limited way. Here is a list of relevant scientific papers:

Depression

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6610568/>

Accuracy of chatbot & psychology

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6914276/>

Bipolar mood changes with heartbeat

<https://ieeexplore.ieee.org/abstract/document/7454702>

Depression & anxiety chatbot

<https://mental.jmir.org/2017/2/e19>

Adequate emotional reaction for chatbots

https://link.springer.com/chapter/10.1007/978-3-319-09767-1_37

Chatbot for autistic teenagers

<https://dl.acm.org/doi/abs/10.1145/3383652.3423900>

Tobacco & alcohol use disorder

<https://www.sciencedirect.com/science/article/pii/S0376871618306823>

Empathic chatbot to prevent depression

<https://onlinelibrary.wiley.com/doi/full/10.1111/exsy.12151>

Emotional dialogue analysis & sentence generation

<https://ieeexplore.ieee.org/abstract/document/7962482>

App design for mental health

<https://dl.acm.org/doi/pdf/10.1145/2786567.2787136>

Conversational agent for depression screening in digital ecosystems

<https://www.researchgate.net/publication/344012987> Perla A Conversational Agent for Depression Screening in Digital Ecosystems Design Implementation and Validation

Conversational agents in the treatment of mental health problems: mixed-method systematic review

<https://mental.jmir.org/2019/10/e14166/>

Ways of doing things

To help the person, we will use a chatbot with NLP technology within a mobile application and specific design guidelines that will make the user feel confident. However, this application should be considered as a "first indication" of a possible mental disorder, the advice of a specialist will always be more relevant.

How do we know that it is working?

We have referenced several scientific papers concluding on the effectiveness of these chatbots. But each time, their conclusion is to use this application as a "supportive" tool. Therefore, we propose activities and objectives to the user that will make him feel better, so we can also talk about a "mental wellness" application.

Research

How do simple positive activities increase well-being?

<https://journals.sagepub.com/doi/full/10.1177/0963721412469809>

Quality of life and leisure activities: how do leisure activities contribute to subjective well-being ?

<https://link.springer.com/content/pdf/10.1007/s11205-010-9724-2.pdf>

Development of a mobile phone app to support self-monitoring of emotional well-being: a mental health digitalization

https://mental.jmir.org/2016/4/e49/?utm_source=TrendMD&utm_medium=cpc&utm_campaign=JMIR_TrendMD_0