

Can AI help tackle the mental health crisis?

Earlier this year, Health Secretary Matt Hancock announced that the NHS will receive £250 million to build an artificial intelligence laboratory. It will be implemented to help doctors treat diseases including cancer, dementia and heart disease.

However, in recent years the NHS has been overrun with mental health patients, evident by mental health spaces in hospitals across the country not having enough beds for the vast amount of people that need treating. With cuts to mental health services happening all over the UK, the number of patients in need will only surge which means work needs to be done to help tackle the emergency. So, aside from physical conditions, can AI be used to help with this mental health crisis the same way that it is being used to help with other diseases?

The Alan Turing Institute is a national AI and innovation research centre currently working on a project called 'AI for precision mental health.' The project aims to create AI tools that will help diagnose patients with mental health problems earlier and with more precision as AI can catch and monitor behavioural patterns in people much quicker than a human can. However, AI is already being used to help treat mental health.

Ieso Digital Health provides cognitive behavioural therapy (CBT) online on behalf of the NHS where users fill out questionnaires in order to be paired with the most appropriate therapist and then complete activities with the therapist that will help users to unlearn negative thought patterns and identify what

triggers lead to declines in their mental health. This all happens digitally but with a real human therapist. It was announced at the beginning of this year that Ieso will be integrating AI into this service to help therapists treat patients' mental health issues. Labelled the 'clinical decision support tool,' the AI will help therapists determine the patient's primary problem, how severe their mental health issues are, how likely they are to drop out of treatment and a prediction of what exact condition they suffer from. This will be the first time AI is used to treat mental health in this way on a global scale.

Global healthcare company SilverCloud also uses a digital CBT platform in the UK on behalf of the NHS. It was announced in October 2019 that they have partnered with Microsoft to infuse AI and machine learning into their CBT offering. The AI will work to analyse user behaviour to determine which CBT strategies are the most effective for each patient and use this information to create a better, more personalised treatment for each individual patient.

Last year, IBM Research, who have research labs all over the world, analysed transcripts from thousands of hours of psychiatric sessions using machine learning in order to help therapists predict and monitor mental health conditions. In one of their studies, AI predicted with one hundred per cent accuracy who would and who would not eventually develop psychosis in the following two and a half years. That's impressive. In five years time, IBM aims to use AI to indicate a person's mental health and physical wellbeing using patterns in speech and writing.

Mental health help apps on the rise

Apps are accessible to everyone as most of the UK population owns a smartphone. Because of this, apps using AI to help people suffering from poor mental health are on the increase. Replika is an 'AI companion' which acts as a digital friend available to comfort users 24/7. The more the user talks to the app through a text messaging service, the more it learns about them and so, the better a friend it becomes. Users can share their experiences, emotions and thoughts, letting an emotional load off and Replika will respond like a friend.

eQuoo is an 'emotional fitness game' that aims to provide users with psychological skills to help them through life. It does this through a series of games that will help people to communicate more effectively in the real world and maintain better mental wellbeing. Woebots is an AI chatbot developed by psychologists to help people deal with depression and anxiety. It works like a friend and life coach, facilitating uplifting conversations between the woebot and the user.

Instagram and declining mental health

Using AI and algorithms to track and predict behaviour hasn't been very good for us in the past. Many times, the social network platform Instagram has come under fire for worsening the mental health of its users. In 2017, a study published by the Royal Society for Public Health included a poll of 1,479 people aged 14-24 who scored apps on how they may or may not contribute to anxiety, depression, loneliness, bullying and body image with Instagram coming out the worse for mental health. Pressures on the social network have led to the platform hiding 'likes' to better improve users' mental health.

Instagram uses AI for explore page and search function, target advertising, to enhance the user experience, filter spam, fight to cyberbully, delete offensive comments and study the human condition, but what effect is that really having on us? From suicide promotion to selling dangerous weight loss products to cyberbullying, AI has already been used against us in via Instagram.

Is AI a friend or a foe? The answer is probably both, and using it with caution and moderation where possible is perhaps the only way to ensure that it's used in our favour. AI can store and track an infinite amount of data about us which can ultimately be used for or against us. With a mental health crisis to deal with, we need all the help that we can get and technology can work to assist people and enhance lives if we allow it to and don't misuse it. After all, AI learns from human behaviour and can only replicate and amplify the intelligence that is put into it.