

Design thinking can change the treatment of young people with psychological problems

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DEEP is a meditative virtual reality game that the player controls with their breathing. The game teaches deep diaphragmatic breathing in a relaxing and beautiful environment, with the aim of relieving stress. The Radboud University researchers are currently investigating whether DEEP has an effect on anxiety problems. DEEP is being developed by Owen Harris & Monobanda Play. Credit: Radboud University

Behavioural scientists are increasingly designing games that can be used preventatively or as therapy for young people with emerging or chronic psychological problems, such as anxiety or depression. Nevertheless, the development and validation of these games is still in its infancy.

According to behavioural scientists Hanneke Scholten and Isabela Granic of Radboud University, a form of design thinking, which is customary among commercial game developers, could help to deliver on the promise of true interactive online therapy, as published in the *Journal of Medical Internet Research* on 14 January.

Recent prevalence rates show that approximately 80 percent of teenagers with anxiety and depression problems are not diagnosed and therefore they do not receive any treatment for their problems. "They do not know where to find help, or they may not even realise that they have a problem. These young people might therefore need a different approach to help them," says Scholten.

For them, games can have advantages over or as an addition to regular therapy. Scholten: "Games have become part of youth culture. Almost all young people play games. For them, games have a low threshold and, unlike therapy, there is no associated stigma. Moreover, there are no waiting lists for games, so young people waiting for a therapist can be offered immediate help in this way."

E-mental health

Unfortunately, the current state of 'e-mental health' is far from being as interactive and progressive as it could be. It has still not evolved beyond a rather boring self-study programme consisting of twelve sessions of cognitive behavioural therapy. Scholten: "This is not effective for young people, so they become disengaged; for them, more interaction and specific feedback are needed."

The Nijmegen Games for Emotional and Mental Health (GEMH) lab of Isabela Granic, professor of Developmental Psychopathology at Radboud University, develops games based on proven therapeutic techniques. The lab has even produced games that work as well as

cognitive behaviour therapy with the guidance of a therapist. An example is Mind Light, in which young children playfully learn to deal with anxiety.

Design thinking as a tool

In their article in the *Journal of Medical Internet Research*, Scholten and Granic refer to design thinking, which is a common approach in the commercial game sector. According to the authors, this approach is also very suitable for developing therapeutic games for young people, as it makes the game more appealing to the target group and possibly more effective. An important prerequisite of this approach is that the game is developed in dialogue with its target group. Scholten: "We do this by having a genuine conversation with the target group about their needs, before we start developing the game. We then involve the target group throughout the entire process of developing the game. We call this participatory design."

With frequent testing and feedback from the target group, the first prototype is being developed into the final game. The questions addressed during development range from: Do they like the game? If they had a choice, would they choose this game? And does the intervention really have an effect on the targeted behaviours such as anxiety, depression or smoking addiction? Scholten: "It is also important to work in a multidisciplinary team. For example, we work with real game designers to create games that the target group enjoys and has fun playing."

Scholten and Granic therefore argue for more collaboration between [game](#) developers and behavioural scientists. Scholten: "Currently, money is often invested from both sides. Developers make games that are fun to play, but it is unclear whether they are effective and how they function. Scientists and/or psychologists develop games that are potentially

effective when the players actually complete them, but for many young people these games are too boring to hold their interest."

"Attaining sufficient financing is another obstacle. To implement therapeutic games for young people with anxiety or depression, collaborations in the Netherlands must be found. Such collaborations could be sought between municipalities, who are currently responsible for [mental health care](#) for youth, institutions that provide care to [young people](#) and private funding agencies."

More information: Hanneke Scholten et al. Use of the Principles of Design Thinking to Address Limitations of Digital Mental Health Interventions for Youth: Viewpoint, *Journal of Medical Internet Research* (2018). [DOI: 10.2196/11528](https://doi.org/10.2196/11528)

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