

Smarter apps to help fight the scourge of eating disorders

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Credit: Polina Tankilevitch from Pexels

Around 20 million people in the EU suffer from eating disorders with an annual associated cost of EUR 1 trillion. Debilitating and stressful at best, at worst fatal, those suffering can face long delays in getting

treatment. But smart tech could speed things up.

Determining how to support sufferers of eating [disorders](#) is hard as the mechanisms behind the disorders are complex: over- or under-restrained eating, levels of cravings, response to stress and emotional challenges all have their roles to play. Combining with these psychological dimensions are the impacts of advertising, accepted notions of portion control and the many diets that are pushed as solutions.

Researchers, supported by the EU, are providing help to those suffering from eating disorders, creating [smartphone technology](#) to use prior and during treatment. The NEWEAT project, using the ubiquity of smartphones and the internet, has developed a series of apps designed to help, including the PsyDiary, which they hope will benefit the therapy process. Although it is a research tool at the moment they hope to expand upon it in the future.

In a previous study in healthy individuals, one of the team, who is based at The Eating Behaviour Laboratory at the University of Salzburg, found that certain behaviours, like stress and emotions, impact on eating. If people are stressed, they will decrease their eating for pleasure (instead of eating for reasons of hunger). Individuals with bulimic tendencies, however will increase their pleasure based eating when stressed.

As the project says, it isn't only hunger that drives our food intake, but also the desire for self-gratification or the influence of [negative emotions](#) and stress. At the same time, sociological inputs force upon us an unrealistic ideal of beauty leading to strict restraint, such as harsh dieting. This results in frequent decision conflicts between long-term health goals (lose weight, healthy eating) and short-term pleasure.

Using neurocognitive measurements in the laboratory, as well as practice-oriented surveys on smartphones to improve their understanding of

decision conflicts, the team's apps help therapists to treat people whose diet can be often guided by emotions, frustration, stress or boredom eating. The technology is helping people to understand the foundations of anorexia, bulimia nervosa ([binge eating](#) and then purging, either by vomiting or laxatives), [binge eating disorders](#) and obesity. As they point out, such understanding is crucial to bringing the number of sufferers down.

The researchers are trying to find precursors for overeating and binge eating in order to try and intervene before the overeating actually takes place. For example, one of the NEWEAT studies found that [food cravings](#) had peaks and troughs throughout the day – hunger would increase at around midday or dinner time, forming an 'M' shaped pattern based on these cravings. This results in people craving healthier foods, like fruit, in the mornings, but as the day progresses they want unhealthier foods, like sweets.

The project's overarching goal is to develop a tool that wouldn't just monitor but which would be able to offer timely interventions. The team would like to create a smartphone app that could recognise when a person suffering from an eating disorder finds himself or herself in a situation that could trigger a compulsion or craving. The app would then signal the individual to eat something else instead. Tips designed specifically for the type of context could offer concrete advice to the user in a bid to help them overcome the temptation they may feel and deal with the stimulus that triggered their impulse.

PsyDiary is available for both [Android](#) and [iOS](#).

More information: NewEat - Transdiagnostic views on eating disorders and obesity and new approaches for treatment:
cordis.europa.eu/project/rcn/197845_en.html

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