

Press Release

Kickoff of the DynaMORE resilience research project

Researchers plan to develop a personalized computer model designed to help people better manage crises

(Mainz, 03 May 2018) The DynaMORE research project, funded through the HORIZON 2020 European Research and Innovation Program and coordinated by the Mainz University Medical Center, has now officially started. The purpose of DynaMORE is to create a personalized computer model that can be used to measure and enhance psychological resilience in individuals. In our digital age, it is thus quite possible that people would have access to a smartphone app in future that would help make them more resilient.

In psychological terms, resilience is the process of adapting well in the face of adversity, tragedy, continuing stress, or traumatic events. The resilience of individuals is determined by their ability to successfully master difficult situations and to emerge from crises without suffering permanent damage to their wellbeing. Resilient people are mentally healthier and less susceptible over the long term to psychological problems, such as depression or burnout.

Professor Raffael Kalisch, Director of the Neuroimaging Center (NIC) and a member of the German Resilience Center (DRZ) at the Mainz University Medical Center, is responsible for the coordination of the DynaMORE (Dynamic MOdelling of REsilience) project. Its purpose is to develop a computer model of resilience that can be personalized to provide support to individuals who are in difficult stages of their lives or who have experienced trauma. "We want to ensure the model is capable of using individual information to learn what susceptibilities and protective mechanisms the person has and to determine how robust these actually are," explained Kalisch. For this purpose the researchers need to determine as precisely as possible which stress factors an individual is exposed to and how these influence, for example, neural, biological, and cognitive functions. They will thus initially concentrate on discovering how resilience mechanisms work. "Assuming we are able to do this, we can then design a computer model that it is capable—through a smartphone app, for example—of providing personalized recommendations to users that will help improve their resilience and prevent stress-related psychological problems." In other words, the plan is to first better understand the phenomenon of psychological resilience and then, using the insights obtained, develop a tool that will contribute towards enhancing it. In the ideal case, this tool would give users advice on how to better deal with difficult situations. It could, for example, motivate them to adopt more positive thought processes or alternative behavior patterns.

"Businesses are losing billions as a result of employees having to take absence from work because they are suffering stress- or crisis-induced indisposition. Hence the potential benefits of the DynaMORE project are immense as its purpose is to prevent stress-related

health problems and improve individual wellbeing,” concluded Professor Raffael Kalisch with conviction.

The EU project runs for 60 months and will be funded with a total of EUR 6 million. Of this, EUR 1 million will go to the Mainz University Medical Center. A total of twelve partners are cooperating in the project, including the Universities of Berlin, Freiburg, Leuven (BE), Nijmegen (NL), Tel Aviv (ISR), Warsaw (PL), Zurich (CH), the Flemish-Dutch IMEC research center, and concentris research management GmbH in Fürstfeldbruck. It is hoped that some 500 study subjects can be recruited for the purposes of the project.

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