

POPULAR SCIENTIFIC ABSTRACT

[Asge Frederik Matthiesen]

[*"Development of a VR tool for exposure therapy for patients with social anxiety"*]

Virtual reality (VR) used as a tool, developed for use within exposure therapy, has over the last few years shown great potential in relation to providing alternatives to patients with mental disorders within the public health sector. Several research projects today are investigating the use of virtual reality exposure therapy (VRET) as an alternative to the traditional method, cognitive exposure therapy, which is considered the gold standard for treating most anxiety-related disorders. The problem arises in that a part of the patients diagnosed with social anxiety often either interrupt ongoing treatment or never start this treatment. This calls for an investigation of one or more treatment alternatives. The VR8 project is one of the research projects investigating the use of VR as a tool for an alternative to standard exposure therapy. This part will be explored in the development of six VR scenarios for use in a clinical treatment strategy. In this project, six VR scenarios are developed that contain several triggers that can be used to either increase or decrease the degree of anxiety in the patients. Furthermore, a tool is developed that can be used by clinicians in a practical design, as all six scenarios contain a way for clinicians to regulate this anxiety using guided control and biofeedback. A methodological framework is also being developed that can be used to develop this type of scenarios and VR simulations. The purpose of this PhD project was to investigate how to design and develop interactive 360-degree videos where patients can be exposed to anxiety-inducing situations in a controlled and clinical context, developed in close collaboration with clinicians. The methodological progress was mainly based on methods such as the iterative design process, the waterfall method, formative evaluation, and the double diamond model. This development process is highlighted in this thesis and contains four iterations with six concrete VR scenarios that can and must be used in a future randomized control study. Throughout this development process, the various processes will be explained and the development from concept to finished prototype will be described. The technical approach is also described using the equipment that has been used for the use and development of these scenarios. Below will be the final framework, which appears as a proposal for a methodological approach that can be used for the development of 360-degree VR scenarios. In the discussion, emphasis will be placed on the need and the approach to precisely this methodological differentiation from previously known and used methods. The conclusion of this thesis is that, based on previously known methods, six existing effective interactive 360-degree VR scenarios have been developed that can be used for clinical treatment in psychiatry and are to be used in a larger randomized clinical control study. A new framework has been developed that can be used to develop such scenarios again and contribute to a future elucidation of the methodological needs that may arise when exploring VR as a tool for treatment.