

Serious games for police officers under stress

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Stress has a negative impact on the wellbeing and performance of police officers, because it affects their judgements and decisiveness. Supported by an NWO grant of over 750.000 euros, Radboud researchers Karin Roelofs, Isabela Granic and Floris Klumpers will develop a game to train officers in an interactive virtual reality environment to respond optimally under stressful situations.

'Police officers often train in situations that do not resemble real life', says Karin Roelofs, project leader and Professor in Experimental Psychopathology at Radboud University's Behavioural Science Institute and Donders Institute. 'Therefore, our body's stress reaction does not initiate. And that's a disadvantage for the training, because stress literally makes you see the world different, and makes you take different decisions then when you're relaxed. For example, stress decreases shooting accuracies by at least 50%. Virtual reality allows us to train [police officers](#) in lifelike stress situations while giving them real-time physiological feedback, which is essential to learning.'

Heart rate and theta waves

In their project 'Decisions Under Pressure' ('Beslissingen Onder Druk'), Roelofs and her colleagues Isabela Granic and Floris Klumpers will introduce police officers to various virtual high-stress situations, like a shooting incident, domestic violence, a confrontation with hooligans and an arrest. During the training, the officers' heart rate and theta waves will be measured: brain activity associated with increased cognitive control over automatic stress reactions.

Because the officers see this information live (biofeedback), they learn to bring their body into a state that is optimal for decision making under stress: a low [heart rate](#) and more [theta waves](#). 'Our goal is to train the officers in such a way that later, during the real world stress in their work, they do not need biofeedback anymore to bring their body into an optimal physiological state.'

The training will also be made available for other groups under [stress](#), like fire brigade and ambulance staff.

Provided by Radboud University

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