STRIVE

Stress Resilience in Virtual Environments

2011-present

STRIVE is a story-driven approach to using virtual reality (VR) for understanding and training psychological resilience in service members prior to a combat deployment. The goal is to better prepare our troops for the emotional challenges of war, potentially reducing the later incidence of Post-traumatic Stress Disorder (PTSD).

This effort is based on two scientific principles:

1) pre-exposure to traumatic events within a safe environment provides some degree of protection for those later exposed to subsequent trauma
2) resilience, or the rate and effectiveness with which someone returns to normal after stress, can be strengthened through systematic training

STRIVE allows users to experience realistic combat situations portrayed within a virtual reality episode. The system then supports interaction with an intelligent virtual human mentor who provides instruction on how stress can impact the body, the brain, and behavior along with relevant exercises for managing that impact, including psychoeducational material and coping strategies.

STRIVE features six virtual reality scenarios developed with advanced game development software, cinematically designed lighting/sound, and interactive narrative that maximizes credible character development and emotional engagement. Each scenario consists of a combat mission that concludes with a pivotal trauma event similar to those frequently reported by patients to be the emotional source of their post-traumatic stress ruminations. For example, witnessing the death of a child or squad member. At that moment, the virtual mentor delivers resilience training relevant to the immediate traumatic context.

Studies are underway to evaluate and understand its effectiveness as a tool for building resilience. This work is funded through ICT's Army UARC contract and the Office of Naval Research.

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At the University of Southern California Institute for Creative Technologies leaders in artificial intelligence, graphics, virtual reality and narrative advance low-cost immersive techniques and technologies to solve problems facing service members, students and society.

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