SOLVE-IT: Socially Optimized Learning in Virtual Environments: A Web-Delivered HIV Prevention 3D Game Intervention for Young At-Risk MSM

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Abstract

Young men (18-24) who have sex with men (YMSM), especially men of color, are at high risk for contracting HIV. Most existing HIV prevention interventions focus on changing intervening cognitive and deliberative processes or outcomes (e.g., beliefs, norms, self-efficacy, intentions) to change behavior. Many MSM, however, guided by contextual cues in emotionally arousing scenarios, make more automatic risky decisions they later regret. One emotion in a sexual narrative that might precipitate more automatic risky choices for young MSM may be shame (e.g., in one’s sexual desires). But, HIV prevention interventions are not designed to reduce MSM’s shame. SOLVE (Socially Optimized Learning in Virtual Environments), as demonstrated by an NIAID RCT grant, used a sex-positive game to reduce MSM’s shame, increase traditional immediate cognitive outcomes, and reduce unprotected anal intercourse for young Black, Latino, and White MSM (18-24) over 3 months. Could interactive interventions be delivered more broadly over the web? In prior CHRP funded work, a SOLVE interactive video (IAV) intervention was streamed over the web throughout California. However, an IAV approach limits the amount of user interaction, risk challenges users receive, and intervention tailoring to MSM’s decisions. This is addressed using a nationally deliverable 3D animated intelligent agents/interactive digital storytelling game in UNITY. MSM design their own characters, make choices for them on dates and sexual interactions, and are scaffolded by the user character’s virtual future self (participant’s older chosen self-character) to enhance self-regulation when risky. The NIMH-funded SOLVE-IT game development process for young MSM is discussed. Results (N=876) from an ongoing 6-month randomized controlled trial (RCT) -- conducted nationally, over the web, are promising. They reveal greater initial shame reduction and cognitive variable increase (e.g., intention, self-efficacy, consideration of future consequences p’s <.01) for at-risk YMSM immediately following the SOLVE-IT game compared to the wait-list control group.