'Out-of-body' virtual experience could help social anxiety

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(Medical Xpress)—New virtual imaging technology could be used as part of therapy to help people get over social anxiety according to new research from the University of East Anglia (UEA).

Research published today investigated for the first time whether people with social anxiety could benefit from seeing themselves interacting in social situations via video capture.

The experiment gave participants the chance to experience social interaction in the safety of a virtual environment by seeing their own life-size image projected into specially scripted real-time video scenes.

UEA researchers, led by Dr Lina Gega from UEA's Norwich Medical School and MHCO's Northumberland Talking Therapies, worked with Xenodu Virtual Environments to create more than 100 different social scenarios – such as using public transport, buying a drink at a bar, socialising at a party, shopping, and talking to a stranger in an art gallery.

The researchers tested whether this sort of experience could become a valuable part of Cognitive Behavioural Therapy (CBT) by including an hour-long session midway through a 12-week CBT course.

Dr Gega said: "People with social anxiety are afraid that they will draw attention to themselves and be negatively judged by others in social situations. Many will either avoid public places and social gatherings

altogether, or use safety behaviours to cope – such as not making eye contact and being guarded or hyper-vigilant towards others.

"Paradoxically, this sort of behaviour draws attention to people with social anxiety and feeds into their beliefs that they don't fit in.

"We wanted to see whether practising social situations in a virtual environment could help."

Paul Strickland from Xenodu, the company behind the virtual environment system, said: "Our system uses video capture to project a user's life-size image on screen so that they can watch themselves interacting with custom-scripted and digitally edited video clips.

"It isn't a head-mounted display – which anxious people may find uncomfortable," he added. "Instead, the user observes from an out-of-body perspective. They can then simultaneously view themselves and interact with the characters of the film."

Dr Gega's project focused on six socially anxious young men recovering from psychosis who also have debilitating social anxiety. The participants engaged with a range of scenarios, some of which were designed to feature rude and hostile people. The virtual environments encouraged participants to practice small-talk, maintain eye contact, test beliefs that they wouldn't know what to say, and resist safety behaviour such as looking at the floor or being hyper-vigilant.

The main benefits of using these virtual environments in therapy was that it helped participants notice and change anxious behaviours in a safe, controlled environment which could be rehearsed over and over again. Participants were found to drop safety behaviours and take greater social risks. And while realistic to an extent, the 'fake' feeling of staged scenarios in itself proved to be a virtue.

"It helped the participants question their interpretation of social cues," said Dr Gega. "For example, if they thought that one of the characters was looking at them 'funny' they could immediately see that there must be an alternative explanation because the scenarios were artificial.

"Another useful aspect of the system is that it can be tailored to address specific fears in social situations - for example a fear of performance, intimacy, or crowds," she added.

"Two of the patients said that the system felt "weird and surreal", so the element of having an out-of-body experience is something to study further in future – particularly because psychosis itself is defined by a distorted perception of reality.

"This research explored the feasibility and potential added value of using virtual environments as part of CBT. The next stage would be to carry out a randomised, controlled comparison of CBT with and without the virtual environment system to test whether using the system as a therapy tool leads to greater or quicker symptom improvement."

Mr Strickland added: "I hope our technology can help make a difference to the lives of people experiencing social anxiety and other specific anxiety conditions for which controlled exposure to feared situations is part of therapy. It is particularly versatile because it doesn't need technical expertise to set up and use. And the library of scenarios can be built on to capture different types of exposure environments needed in day-to-day clinical practice."

'Virtual Environments Using Video Capture for Social Phobia with Psychosis' is published by the journal *Cyberpsychology, Behaviour and Social Networking*.