**The Use of Technology to Treat Agoraphobia**

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**Introduction**

Agoraphobia is a debilitating mental illness that causes its sufferers to live trapped within their own homes. Agoraphobia and technology have a multi-faceted, agathokakological relationship. Is the treatment of agoraphobia feasible using technology? In this paper, I will give an overview of the history and background of agoraphobia. I will then look at several aspects of the relationship between technology and agoraphobia, including: technology as a trigger, technology as an aid and enabler, as well as technology’s possibilities for treatment.

**History**

* Agoraphobia definition
  + Agoraphobia often leads sufferers to live their lives trapped at home; it is categorized as an anxiety disorder that is based on, sometimes unrealistic, fear [1]
  + “…a type of anxiety disorder in which you fear and often avoid places or situations that might cause you to panic and make you feel trapped, helpless or embarrassed.” [1]
* Agoraphobia challenges
  + “People with agoraphobia often have a hard time feeling safe in any public place, especially where crowds gather” [1]
  + “You may feel that you need a companion, such as a relative or friend, to go with you to public places” [1]
  + “The fears can be so overwhelming that you may feel unable to leave your home” [1]

**Background**

* Necessity of intervention
  + “Agoraphobia can severely limit your ability to socialize, work, attend important events and even manage the details of daily life, such as running errands” [1]
  + “Agoraphobia can also lead to or be associated with: depression, other mental disorders, including other phobias and other anxiety disorders, alcohol or drug misuse to try to cope with the fear, guilt, hopelessness, isolation and loneliness” [1]
* Importance of facing fears
  + “…your anxiety gradually decreases if you remain in public and you can manage those symptoms” [1]
  + “…change unwanted or unhealthy behaviors through desensitization, also called exposure therapy, to safely face the places and situations that cause fear and anxiety” [1]
* Why psychologists, agoraphobes and virtual reality engineers should be interested

**Technology as an Agoraphobia Trigger**

**Availability Heuristic**

* Definition
  + “A person is said to employ the availability heuristic whenever he estimates frequency or probability by the ease with which instances or associations could be brought to mind” [2].
* Frequency of information can increase its availability
  + “…frequent events are easier to recall or imagine than infrequent ones” [2].
  + “Continued preoccupation with an outcome may increase its availability, and hence its perceived likelihood” [2].
* Worldwide coverage
  + “Mass media may become a conduit that spreads negative consequences of community trauma beyond directly affected communities.” [3]
  + “Widespread media coverage extends the boundaries of local disasters, transmitting their impact far beyond the directly exposed population and turning them into collective traumas with potentially detrimental health effects” [3]

**Technology as a Cause of Agoraphobia**

* News causes stress
  + “…repetitive showing of traumatic clips and images that are likely to be displayed on news outlets…” [4]
  + These fears can be triggered by a variety of activities, such as watching the news [2][3]
  + “…watching, reading, or listening to the news may cause people greater stress and anxiety” [4]
  + “Repeatedly engaging with trauma-related media content for several hours daily shortly after collective trauma may prolong acute stress experiences and promote substantial stress-related symptomatology” [3]
  + “Prior exposure to similar and/or violent events may render some individuals vulnerable to the negative effects of collective traumas” [3]
  + “both live and video observation of threatening content can lead to fear conditioning” [3]
  + “Repeated bombing-related media exposure was associated with higher acute stress than was direct exposure” [3]
* Stress causes/triggers agoraphobia
  + “…Given that acute stress reactions may precede long-term mental (e.g., posttraumatic stress symptoms) … health ailments…” [3]
  + “… experiencing stressful life events, may play a major role in the development of agoraphobia.” [1]

**Technology Aids and Enables Agoraphobes**

**Technology as an Aid**

* Can do many things that you used to have to leave your house for
  + Many jobs are able to be done from home [5] [6]
  + Now, many agoraphobes are able to function from home with the aid of the internet [5] [6]
  + “the newly-launched Amazon Fresh” allows you to have groceries delivered to your home [5]. Many local grocery stores offer delivery.
  + Many delivery services exist that will bring restaurant food to your door [5]
  + “Amazon is the absolute easiest way to get anything and everything you need in life dropped on your doorstep in two days or less” [6]
* Internet Improves Support and Awareness
  + “Day or night, sufferers can now connect instantly with others like themselves in forums and social media groups all around the world, who can offer advice and emotional support” [7]
  + “…we now have the ability to access information from health organisations, doctors and medical researchers on a global scale” [7]
  + “Through these new media channels, mental health has become a hot topic, with charities and other organisations reaching out to the public to raise awareness and to educate.” [7]
  + “It has empowered a great many people, and allowed them to take control of their health and their lives. It has connected people in a way that would otherwise have been impossible.” [7]
* Pokemon Go
  + Quotes

**Technology as an Enabler**

* Can avoid many fears by remaining indoors
  + ‘Thanks to the Internet, activities like “going outside” or “being a productive member of the community” are becoming increasingly optional parts of daily life Entertainment at home (Netflix, video games purchased online, television)’ [6]
  + “…you can download books, and films, and music direct to your smartphone or tablet without leaving the house Never leaving the house prevents recovery” [5]
  + “…online streaming services like Netflix, Hulu Plus, and Amazon Prime have massive catalogs of movies, TV shows, and original programming” [6]
* Communication
  + “…using FaceTime or Skype to communicate with the outside world” [5]

**Technology as a Treatment for Agoraphobia**

**Non-Technological Treatments**

* Medication
  + “Antidepressant and anti-anxiety medications are often used to treat agoraphobia and panic symptoms that frequently accompany agoraphobia” [1]
  + “Medications for various conditions can have emotional and behavioral side-effects” [7]
  + “Both starting and ending a course of antidepressants can cause side effects that seem like a panic attack” [1]
  + “…the herbal supplement called kava appeared to be a promising treatment for anxiety, but reports of serious liver damage — even with short-term use — caused several European countries and Canada to pull it off the market” [1]
* Counselling
  + “Also known as talk therapy or psychological counseling, psychotherapy involves working with a therapist to reduce your anxiety symptoms. Cognitive behavioral therapy is one of the most effective forms of psychotherapy for anxiety disorders, including agoraphobia” [1]
  + “If you have agoraphobia, you may be too afraid or embarrassed to go to your health care provider's office” [1]
  + “You may also want to take a trusted relative or friend to your appointment who can offer comfort and help, if needed” [1]
  + “Agoraphobia treatment can be challenging because it usually means confronting your fears” [1].

**GPS as a Monitoring Device**

* How it works
  + “GPS technology provides outcome measures that may relate to the outcome of interventions designed to treat psychological disorders that, for example, may leave a person homebound (e.g. Agoraphobia, PTSD, TBI)” [8]
  + “GPS technology makes it possible to record the number of places a person visited over a given time.” [8]
* Why it helps
  + “But practicing going to more and more places can make them less frightening and anxiety provoking” [1].
  + “self-report methods can be subject to memory distortions, influenced by social desirability in all of its forms, and, like direct observational methods, highly reactive” [8]
  + “the use of GPS technology… increases the researcher ability to gather some forms of real-time naturalistic data unobtrusively and without the memory distortions, demand characteristics, and reactivity often introduced by self-report” [8]
  + “…to measure the outcome of interventions designed to help [individuals] who suffer from psychological disorders predicted to leave individuals homebound.” [8]

**Virtual Reality and Skype Treatments**

* Skype treatments
  + “…may also offer some sessions over the phone, through email, or using computer programs or other media” [1]
* Virtual reality treatments
  + “The results showed an important reduction in all clinical measures after treatment with virtual exposure and the patient reached the therapeutic goals established during the pretreatment assessment” [9]
  + “…VR is a useful tool that allows for a high degree of control over virtual situations” [9]
  + “…can conduct exposure to different situations…” [9]
  + “…allows us to conduct interoceptive exposure (by simulation of bodily sensations like shortness of breath, blurred vision, or palpitations) while the patient is immersed in a virtual agoraphobic situation…” [9]
* Why they help
  + “…20% to 25% of participants reject [in vivo](http://topics.sciencedirect.com/topics/page/In_vivo) exposure because they find it too aversive to confront the feared situations” [9]
  + “The flexibility of the virtual scenarios allowed us to create a hierarchy of feared events and sensations specifically for this patient and to conduct the exposure tasks using the same procedures that would be used in a traditional exposure program” [9]
  + “VR enacts a safe environment for the patient to explore the problem and practice using therapeutic tools in the consultation room” [9]

**Conclusion**

Re-focus, summarize of major topics

**References**

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