**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 is a mental illness; it is categorized as an “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]. “The fears can be so overwhelming that you may feel unable to leave your home” [1]. The Mayo Clinic Staff [1] explains that “people with agoraphobia often have a hard time feeling safe in any public place, especially where crowds gather” and that they “may feel that [they] need a companion, such as a relative or friend, to go with [them] to public places”. People with agoraphobia face many challenges in their day to day lives.

**Background**

The challenges that people with agoraphobia face are the reasons why intervention in necessary. “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]. Being unable to function normally can take a toll on one’s mental health and can “…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]. These issues that can arise from suffering with agoraphobia make treatment important.

The main psychotherapy treatments for agoraphobia all center around the sufferer having to face his/her fears. Frequent exposure to his/her fears can help “…change unwanted or unhealthy behaviors through desensitization, also called exposure therapy…” [1]. During exposure therapy a patient with agoraphobia should find that his/her “… anxiety gradually decreases if [he/she] remain[s] in public and [he/she] can manage those symptoms” [1]. Psychologists, agoraphobes and virtual reality engineers should be interested in upcoming technologies that help people with agoraphobia to face their fears in a safe environment. The relationship between agoraphobia and technology is much more complex than the single-facet of being able to treat agoraphobia with technology.

**Technology as an Agoraphobia Trigger**

**Availability Heuristic**

A heuristic is a technique for quick estimation based on previous knowledge that we have gained; and extending a simple heuristic, “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]. It has been found that “…frequent events are easier to recall or imagine than infrequent ones” [2]. If a person becomes preoccupied with an event then the event becomes easier to recall, and the person may, in effect, subconsciously convince themselves that the event on which they have been thinking has a higher likelihood of occurring than it actually does [2]. Technology can skew our availability heuristic.

As technology improves our world becomes smaller. Television and internet can bring information from all over the world into our homes. Silver, Holman and Garfinb [3] suggest that “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”. Because of the effects of the availability heuristic “mass media may become a conduit that spreads negative consequences of community trauma beyond directly affected communities” [3]. As such, I believe that these technologies can cause people to believe that they are likely to experience the events about which they have seen or read, even if this belief is not, in fact, likely at all.

**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
  + “I now have a legitimate reason to want to explore the neighborhood that I haven't really known despite living here for about 5 years.” [8]
  + “…I was genuinely excited to be outside, even if I wasn't interacting with that many people.” [8]

**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)” [9]
  + “GPS technology makes it possible to record the number of places a person visited over a given time.” [9]
* 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” [9]
  + “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” [9]
  + “…to measure the outcome of interventions designed to help [individuals] who suffer from psychological disorders predicted to leave individuals homebound.” [9]

**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” [10]
  + “…VR is a useful tool that allows for a high degree of control over virtual situations” [10]
  + “…can conduct exposure to different situations…” [10]
  + “…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…” [10]
* 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” [10]
  + “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” [10]
  + “VR enacts a safe environment for the patient to explore the problem and practice using therapeutic tools in the consultation room” [10]

**Conclusion**

Agoraphobia and technology intersect at several points. Technology that causes stress may lead to agoraphobia. Technology can help people who suffer from agoraphobia to function more easily at home. Contrastingly, the same technologies that help people function from home also enable those people to continue on without treatment. As I have shown in this paper, I believe that certain technologies can aid in the treatment of agoraphobia. In conclusion, understanding the relationship between agoraphobia and technology is important for prevention, support and treatment of agoraphobia.

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