Young Adults with ASD and the Potential Positive Impact of Video Game Therapy

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Objective:

The purpose of this research poster, along with the companion paper, is to show a general overview of what research has been done on video games being a possible means of therapy and interpersonal intervention for young adults and teens with Autism Spectrum Disorder (ASD). Findings show that there is research being conducted on the subject matter, but the overall research pool is small yet growing as interest in the subject matter increases. Areas that need more research are designing a video game for therapy and determining whether what makes a therapeutic game and are all games therapeutic. The individuals that are being studied in the research are children and adolescents that are on the "high functioning" end of ASD. There is very little research involving children and adolescents on the lower end of ASD. Video games can be a potential tool to teach children and adolescents how to communicate with other people as it provides a safe environment for them to learn without negative outcomes that could discourage them to connect with their peers. While it looks promising, more research on both autism and video games will be needed in order to chart a proper course of action.

Methods:

For this literature review, the following methods were used.

- The search engine I used to find my articles was Google Scholar

- Key Terms used: Autism, Autism Spectrum Disorder, Video Games, Gamification, Serious Games

- Total articles found for the research was 24 articles, but only seven articles were evaluated and chosen to be used in the Literary Review because they were the most relevant to the research question.

Results:

- Games can be used to help with facial recognition of emotions, and with animation the facial expressions can be more exaggerated and the emotions easier to identify.

- Information communication technologies (ICTs) can be used in therapy for individuals with ASD in numerous ways because they tend to be more attractive to the patients.

- Virtual Reality and interactive storytelling offer opportunities for autistic intervention as it allows people with ASD to immerse themselves in more realistic environments for learning with low risk when errors are made.

- Serious games, such as *America's Army*, can provide additional options to treatment and prevention of depression and anxiety in children and young adults with ASD. Since depression and anxiety are more common disorders, this could be a potential gateway to more research and treatment for people.

- Including commercial games, such as *Skyrim*, in treatments and interventions for people with ASD can provide another attractive option as commercial games are more known and available than serious games.
- More games should be designed that could teach skills that people with ASD struggle with including cognition, communication, and social skills.
- Video games can teach people with ASD to recognize the range of emotional expression and build skills so they can recognize the emotions in real life.

Conclusion:
What we see so far is promising and would be able to help individuals with ASD that struggle with communication difficulties. However, more research and studies will be needed. Studies that include a larger sample size and more research should be done for teenage individuals as they are in the most critical time in their lives. While "higher functioning" individuals were part of the studies, the possibility of also conducting studies with "lower functioning" individuals would be interesting to see as the research is almost nowhere to be found. Another potential thing we could do is add more research to commercially well-known games and see what they could do to assist people who have ASD.