Online Video Games as Valid Digital Tools for the Treatment of Fluency Disorders

Paula E. Thomson, B.S.E., Alexis L. Hamm, & Erik X. Raj, Ph.D., CCC-SLP

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Monmouth University
New Jersey, United States

Video Games

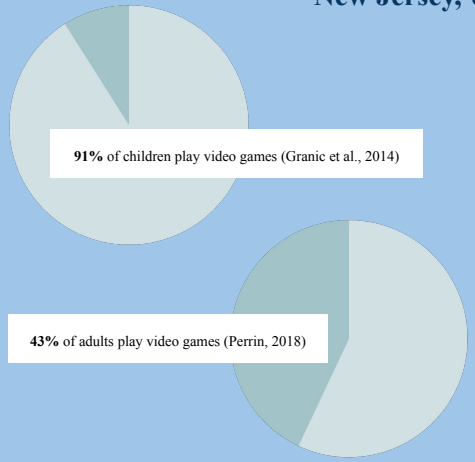
Video game apps are some of the most popular types of mobile apps available for download, with puzzle, strategy, and adventure games being the highest downloaded within the category (Perrin, 2018). Like a large percentage of video games, puzzle, strategy, and adventure ones put players in active positions where they are striving to improve on previous scores and reach new levels (Durkin & Conti-Ramsden, 2014). During game play with such games, players mentally analyze what they notice on the screen and plan their actions accordingly with the hopes of meeting or exceeding a given goal (Blumberg & Randall, 2013). In short, these types of video games allow players the opportunity to make, and reflect upon, certain decisions in an effort to solve a particular problem (Tran, 2018). This concept is strikingly similar to the reflective decision-making process that a client with a fluency disorder usually engages in while participating in a speech therapy experience with a clinician (Chmela & Campbell, 2014; Plexico, Manning, & DiLollo, 2010).

Literature Review

It has been found that a healthy number of people who stutter (PWS) do happily take part in mobile device-driven experiences (e.g., numerous social networking activities) on their iPhones and iPads (Dignazio et al., 2020; Fuse & Lanham, 2016; Raj & Daniels, 2017; Trichon & Raj, 2018). So, perhaps it is not too far of a stretch to assume that a certain percentage of those people may also partake in the ever increasingly, popular pastime of video game playing. Furthermore, perhaps the act of playing and discussing video games during speech therapy might result in creating a more comfortable environment that is optimal for meaningful and robust conversations to occur that revolve around the subject stuttering.

Several studies have documented the fact that clinicians are not comfortable working with clients who stutter (Brisk, Healey, & Hux, 1997; Kelly et al., 1997; Mallard et al., 1988; Tellis et al., 2008), a fact that is particularly concerning given the negative impact that many individuals who stutter experience in their lives, in association with their speaking difficulties (e.g., Daniels, Gabel, & Hughes, 2012; Hughes, Gabel, Goberman, & Hughes, 2011; Plexico, Manning, & DiLollo, 2005; Yaruss, 2010; Yaruss & Quesal, 2016).

Utilizing video games as a therapy material is one side of the coin, while speech therapy within itself can possibly be structured using a video game design approach (Folkins, Brackenbury, Krause, & Haviland, 2016). Two principles of video game design that could connect to speech therapy are self-discovery and reward systems (Folkins, Brackenbury, Krause, & Haviland, 2016). Clinicians can use video games to encourage those who stutter to examine their own emotional reactions to stuttering, to role-play different ways of responding to other people's reactions to their stuttering, to explore the negative impact of stuttering, and to discuss ways that the impact may be reduced.



91% of children play video games (Granic et al., 2014)

43% of adults play video games (Perrin, 2018)

Broad Evidence

For some clients, integrating video game experiences into their therapy can make a positive impact on their progress, for a multitude of reasons. About 45% of children, ages ten to twelve have their own smartphone, providing access to the digital world (Mobile Kids, 2017). Within the next age bracket, children ages thirteen to seventeen claim they are on the internet "almost constantly" (Anderson & Jiang, 2018). This must be taken into consideration when planning personalized and effective therapy.

Video game experiences are a modern and meaningful form of play that can help children to grow as learners (Lobel et al., 2017). The world of video games is etching its way to the top of many children's priority list. Children are able to form social connections as well as problem solve amongst themselves or others. Since video games are the "modern" way of life for children, why can't we, as speech-language pathologists, provide "modern" therapy for our clients? It has been shown that video games decrease social isolation and loneliness (Marston & Kowert, 2020). Especially during the Coronavirus Disease 2019 (Covid-19) pandemic, it can be said that video games provide a safe outlet for children to combat these bits of isolation and loneliness. As future and practicing clinicians, shouldn't it be our goal to, first and foremost, increase our clients' overall quality of life? Video games and their strategic, yet purposeful integration into therapy could be one of the many possibilities in doing so.

Purpose

Today's speech-language pathologists are expected to understand and utilize emerging forms of technology for the assessment and intervention of communication disorders (American Speech-Language-Hearing Association, 2016). One such form of emerging technology that is currently being used in speech-language therapy-related settings are smart mobile computing devices, such as iPhones and iPads (Bruno-Dowling, 2012; Edwards & Duchovny, 2017).

These devices house software programs, or applications (apps), that have been found to be beneficial for individuals who are working toward improving their communication abilities (Davis & Sweeney, 2015; Heyman, 2018). Through the modified and custom utilization of apps with particular clients, clinicians are able to use these digital tools to deliver evidence-based treatments in a manner that could be defined as valid and relevant (Ramsberger & Messamer, 2014). These apps, many of which are video games, can be seen as valid and relevant treatment materials that could keep our clients engaged and motivated.

Research Questions

To guide this study, the following research questions will be addressed:

(1) What are the different reasons that PWS choose to engage in video game experiences?

(2) In what ways do PWS describe their video game experiences?

(3) In what ways might video game experiences be able to be appropriately infused into speech therapy designed for PWS?

Proposed Methodology

Phenomenology will be the research methodology utilized. This strategy of inquiry has been frequently used by researchers in the field of communication sciences and disorders as a way to gain a better understanding of particular phenomena. Quantitative and qualitative data will be gathered from an online survey. The online survey will utilize multiple-choice questions and open-ended questions. Statistical data collected will include nominal and ordinal categories. The investigators will use descriptive statistics to analyze data through the use of open-text responses. Additionally, the investigators will summarize what each participant shared for qualitative answers in an attempt to fully recognize themes.

Proposed Survey

Our survey will consist of a combination of multiple choice, open-ended, and Likert scale questions. Questions will target the individual's gaming habits and their experiences with stuttering. Below are examples of potential survey questions to pose to the participants in the study.

Timing and Socialization
-How often do you play video games?
-Do you play video games alone or with others?
-When you play video games, in one sitting how long do you play?

The "Gamer"
-Why do you play video games?
-What is your definition of a "gamer"?
-Do you consider yourself a "gamer"? Why or why not?
-If you could describe playing video games in one word, what would it be?

Challenges
-Do any challenges present when playing video games as a person who stutter? If so, explain those challenges.
-Does stuttering impact your ability to play video games?
-Does stuttering affect your ability to maintain relationships/friendships?
-Does stuttering affect your ability to maintain relationships/friendships with those you play video games with?

References

Full references available upon request. Please email eraj@monmouth.edu.