2023

Video Game Therapy for ADHD Managment

Wilhelm Alec Sison Beroncal
Dominican University of California

https://doi.org/10.33015/dominican.edu/2024.NURS.RP.06

Video Game Therapy for ADHD Management

Alec Beroncal

DOMINICAN UNIVERSITY of CALIFORNIA

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) stands out as the most common childhood neurodevelopmental disorder, leading to functional challenges in various aspects of the daily lives of affected young individuals (Bul et al., 2016).

There is no current cure for ADHD, however effective treatments are available through medications. The FDA has authorized two types of medications for managing ADHD in children as young as 6 years old: stimulants, such as methylphenidate and amphetamine (e.g. Adderall), and non-stimulant options including Strattera, Intuniv, Kapvay, and Qelbree (U.S. Food and Drug Administration, 2023).

The choice of treatment is highly individualized to meet the specific needs of each patient and their family (CDC, 2023). It is noteworthy that 69.3% of children with ADHD receive medication as part of their treatment, while 30.7% do not (NSCH, 2011).

While extensive research has established the efficacy of medication-based approaches for ADHD management, there is insufficient research on non-pharmacological alternatives.

Hypothesis

The video game Endeavor will decrease symptoms of ADHD among children ages 8-12 years old who do not use medication as part of their treatment plan

Method

- **Design:** Quasi-experimental
- **Participants:** convenience sample (n=100)
- **Inclusion Criteria:** Ages 8-12, not on Medication
- **Independent variable:** Video game intervention (Endeavor)
- **Dependent variable:** Decrease in ADHD symptoms
- **Procedure:**
  - 100 participants will be evenly split and randomized into an experimental and control group
  - Group A will be the control group
  - Group B will play Endeavor
  - Endeavor will be played 25 min a day over a period of 2 weeks
  - Parents will grade their children using the AD/HD Rating Scale IV before and after taking the intervention
- **Measurement and Tools**
  - AD/HD Rating Scale IV (AD/HD-RS): Has a four point scale of severity (0 = never; 1 = sometimes; 2 = usually and 3 = always) and includes two dimensions of inattention and hyperactivity/impulsivity

Email Contact

wilhelmalec.beroncal@students.dominican.edu

IRB# will be approved

Data Analysis

Statistical analysis:

- Descriptive and inferential statistics (T-test)
- If the p-value is < .05, the results will be statistically significant, the hypothesis will be supported, and the null hypothesis will be rejected.

Conclusion

ADHD remain the most prevalent neurodevelopmental disorder, affecting young individuals. While the pharmacological approach is the first line of treatment for ADHD in children, there is a growing interest in non-pharmacological alternatives. The study aims to address this gap by offering a digital therapeutic video game intervention called Endeavor to determine its efficacy. The objective of this intervention is to provide more research on non-pharmacological ways to manage ADHD and offer more alternatives for those who prefer non-pharmacological approaches. As a result of this study, it is expected that the scores in AD/HD Rating Scale IV (AD/HD-RS) will decrease, which could lead to better outcomes for children with ADHD.

References

Bul, KC., Kato, PM., Van der Oord, S., Danckaerts, M., Vreeke, LJ., Willems, A., Van Oers, HJ., Van Den Heuvel, R., Birnie, D., Van Amelsvoort, TA., Franken, IH., Maras, A. (2016). *Behavioral Outcome Effects of Serious Gaming as an Adjunct to Treatment for Children With Attention-Deficit/Hyperactivity Disorder: A Randomized Controlled Trial J Med Internet Res* 10.2196/jmir.5173

Centers for Disease Control and Prevention (2023). *Symptoms and diagnosis of ADHD.* https://www.cdc.gov/ncbddd/adhd/diagnosis.html

Food and Drug Administration (2023). *FDA announces shortage of Adderall.* https://www.fda.gov/drugs/drug-safety-and-availability/fda-announces-shortage-adderall

National Institute for Mental Health (2011). *Attention-deficit/Hyperactivity disorder (ADHD).* https://www.nimh.nih.gov/health/statistics/attention-deficit-hyperactivity-disorder-adhd