Group B2 Response For Wednesday (4/28)

Include the following:

- **What is the question under investigation?**
    - Does playing video games during early childhood affect an individual's executive functioning into adolescence? Specifically, which types of video games have an influence and what kind?
- **Motivate your study--why is it interesting? Why is it important?**
    - For the purposes of this study executive function is defined as mental skills used to handle everyday life such as working memory, flexible thinking, and self control. These aid in learning, work, and other daily tasks. And these skills are important skills that all individuals will benefit from and important for everyday life.
    - This study is interesting and important because video games have always been relevant and there are many different studies/opinions said about how video games impact children. For example, studies looking into how violent video games increase violent and delinquent behavior in children.
    - This study is important because it will provide further evidence to understanding how videogame use can affect adolescents in the long term for cognitive abilities in executive functions. This can add to existing research about the amount of screen time that can or cannot be a factor in functioning abilities for growing children.
    - Prior research for adolescents acting out; Prefrontal cortex & Amygdala development still under way so young adolescents are stated to be "more impulsive, more likely to engage in risky behavior, and less likely to think through their actions and thoughts". The article below claims the developmental process and functioning of young adolescents will not fully be complete till at least around the age of 25.
        - Teen Brain: Behavior, Problem Solving, and Decision Makinghttps://www.aacap.org › Facts_for_Families › FFF-Guide
    - According to the journal article Video Gaming and Children's Psychosocial Wellbeing: a Longitudinal Study from the Journal of Youth and Adolescence, Gaming over a long period of time found to increase emotional problems, but was not found to affect psychosocial changes. Further, it was found that gaming frequency, "was related to increases in internalizing but not externalizing, attention, or peer problems, violent gaming was not associated with increases in externalizing problems…". This study concluded that further research is needed to determine how the effects of video gaming can affect adolescent behavior. For our study's purposes, this information is relevant because it provides evidence for some types of changes in cognition and behavior related to video gaming.
        - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5346125/
- **Participants (ages, backgrounds as appropriate)**
    - Five-year-old children studied longitudinally until 15 years old

        - The reason for starting at five is to be able to properly measure the executive functions of children and children at these ages can have full capability to play video games.
        - Ending the study at age 15 is the general age when youth tend to change behavior, so this is a good time to test for executive functioning and changes.
    - Possible mix of Low-Income, Higher-Income infants
    - Living in the US
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- **Methods**
    - Before beginning the study, all participants will take a pretest on the Behavior Rating Inventory of Executive Function.
    - Children would be split into three groups. Two of the groups would be exposed to video games playing either an “educational” or otherwise constructive game like Minecraft or a game with significant amounts of violence, such as Doom. The third group would not be exposed to video games and instead do some other appropriate activity for the duration of the experiment.
    - These conditions would be applied once every three years, with each group remaining consistent with the games they were exposed to. At fifteen years old, the now adolescent children would be instructed to play the video games once again, then tested on the Behavior Rating Inventory of Executive Function to measure the long-term effects of video games over time as a post-test.
- **Predictions**
    - Hypothesis #1 - Infants exposed to the violent video games will show lower executive functioning in adolescence.
    - Hypothesis #2 - Infants exposed to the constructive/educational video games will show higher executive functioning in adolescence.
- **Assessment**
    - Behavior Rating Inventory of Executive Function
    - Assess individuals from 5-15 years old