EFFECTS OF VIRTUAL VIOLENCE ON CHILDREN AND ADOLESCENTS
Agenda

- History of video game use
- Use Data
- Differences in Data
- Good vs. Evil
- Components
- Playing Violent Video games
- Effects on Brain
- Cause or Factor to violence
- Behavioral Effects
- How to manage use/effect

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History of Video Games
First

1958 – Tennis for Two

1961 - Spacewalk
1970’s

Pong

Frogger
1980’s

Mortal Combat

Double Dragon

Developers’ Experiments – What would the public accept?
1990’s

Wolfenstein 3D

Doom

First Person Shooters
2000’s

Soldier of Fortune

Diablo
Most Played Video Games of All Time
POTENTIALLY SKEWED DATA

Conservative Scientific vs. News Reports of the Effect of Media Violence on Aggression (Anderson & Bushman, 2002b)
User Data

- At least 155 million Americans play video games.
- Average 2 gamers in each game-playing U.S. household.
- 4/5 households own a device to play video games.
- 99% of American boys play video games. 94% of girls play video games.
User Data (cont.)

- Common for US children and adolescents to play more than 20 hours per week. Not uncommon for males to play 40 hours/week.

- In two separate studies, teens spent time gaming 9-13 hours per week. (2010)

- 90% of games rated as appropriate for children 10 years or older contained violence, including games rated “E” for everyone. (2008)
User Data (cont.)

- Majority of top selling games contain violence
- Children’s favorite games contain violence
Good vs. Evil
Positive Effects of Video Game Playing

- Introduces children to technology
- Gives practice in following directions
- Some provide practice in problem solving and logic
- Provide practice in the use of fine motor skills
Positive Effects of Video Game Playing (cont.)

- Coordination and spatial cognition
- Pain Management
- Pro-social behavior
- Education
- Exercise
Negative Effects of Playing Video Games

- Video Game Addiction (Gentile, 2009)
- Attention Deficits –
  - Controlled vs. Reactive-type games (Anderson, 2012)
  - Pathological Players- ADHD 3 times more likely to be diagnosed (Gentile, 2009)
- School Performance
- Increased Aggression
- Decrease in Positive (helping) Actions
WHAT WILL DETERMINE EFFECTS OF VIDEO GAME PLAYING (Gentile, Anderson, et al)

- Amount –
  (-) Low performing students likely to spend more time playing
  (-) Reduces physical activity (i.e. gaming = obesity)
  (+) Movement games have opposite effect
  (-) Carpal tunnel syndrome and other repetitive stress injuries
  (-) video-induced seizures in people with epilepsy or photosensitivity disorder
Content:

(+) If of educational value, can:

1. Improve related education skills;
2. Help manage chronic health problems better than a doctor’s pamphlet for recognizing symptoms and medication management;

(-) If of violent content, can:

1. Increase aggressive thoughts, feelings and behaviors that can translate into real life situations;
Structure:

1. Effective Scanning: Scan screen constantly for small changes (i.e. signals announcing sudden appearance of the “enemy” and respond quickly.)

   (+) Learn to shift attention quickly, which would be helpful in job such as air traffic controller.

2. Navigate a three-dimensional virtual world on a two dimensional screen.

   (+) Improve way-finding skills and mental rotation skills, which would be helpful to laparoscopic surgeons, for instance.
Mechanics:

(+) Improve particular motor skills improving hand to eye coordination.

(+), Improve use of both dominant and non-dominant hands in fine and gross motor skills.
Context:

(+ ?) Games that require cooperation and teamwork for success might translate to higher cooperation and coordination, but no related research found.

(+/-) Social context may change outcomes.
PLAYING VIOLENT VIDEOS

Violence = Ability of a player to intentionally harm others in a game.
How Violent Video Game Playing Affects The Brain
Individuals who regularly play violent games actively suppress a strong emotional reaction, thereby becoming desensitized to violence in video games.
AAP tested (MRI) brain scans frequent game players. Larger volume in left straitum (involved in risk/reward processing). More used more needs increase. (Dana Foundation, 2012)
Stimulation in limbic area of the brain prevents the neural pathways related to the prefrontal cortex from developing as they should. Direct effect would potentially impair:

Functions of Frontal Lobe  
(Higher Level Thinking)

- Reasoning
- Planning
- Language
- Long-term Memory
- Impulse Control
- Problem Solving
- Emotions
- Judgment
- Motor Function
- Imitation
- Social/Sexual Behavior
Causal Effect?

Does violent video game playing directly lead to violent behavior?

Or

Risk Factor?

Is it on of a number of factors in violence occurring?
Direct Correlation

Playing Violent Video Games Makes a Difference

Percentage of Students Involved in Physical Fights

Low Hostility
- Low Violent Game Play: 4%
- High Violent Game Play: 38%

High Hostility
- Low Violent Game Play: 28%
- High Violent Game Play: 63%

(Walsh, 2000)
Risk Factor Approach

Adapted from Chapter in W. Warburton & D. Braunstein (Eds) Growing Up Fast and Furious: Reviewing the Impacts of Violent and Sexualized Media on Children (pp. 56-84)
Most Brutal Video Games
Helping the Adolescents with Whom We Work

Important for parents to know they are in the most powerful position to minimize the effects of violent games:

Limit types (content) of games played

Limit amount of time played
FTC Study

Percentage of Minors Successfully Purchasing "Adult" Rated Material

M Rated Games

R Rated Movies

Entertainment Software Rating Board (ESRB)
2016
Tips for Parents

- Check the age ratings and descriptions on the games, at minimum, but be aware the ratings might not be as conservative as you prefer due to affiliation with game developers and retailers.

- Use of an unaffiliated organization is recommended (i.e. www.commonsense.org) which will fairly rate the game and will provide more information than is found on the box.

- When purchasing a game for your child consider what that game will teach your child.

- Choose games that involve more than one player and encourage play with friends and family members.
- Be deliberate about the role you want gaming to play in your home.

- Choose games that promote problem solving, critical thinking and focused attention.

- Think about time and content in planning structure in your home.

- Set up rules and consequences about video game playing – when, where, what games and how long.

- Keep video games out of children’s bedrooms and put in common areas where the play can be monitored.

- Talk to your children/teens about the games they play.
“Letter to Parents: How can you tell if a video game is potentially harmful?”

(Gentile, 2003)

• Play the game or have someone else demonstrate it for you

• Ask yourself the following six questions:

  1. Does the game involved some characters trying to harm others?
  2. Does this happen frequently, more than once or twice in 30 minutes?
  3. Is the harm rewarded in any way?
  4. Is the harm portrayed as humorous?
  5. Are nonviolent solutions absent or less “fun” than the violent ones?
  6. Are realistic consequences of violence absent from the game?

(If two or more answers are “yes,” think very carefully about the lessons being taught before allowing access to the game.)