Media Violence and its Effect on Children

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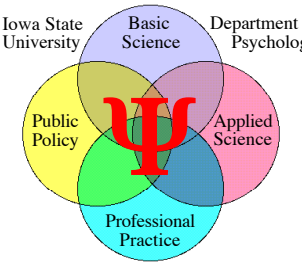


Invited address at Conference on *Protecting Our Children: Youth and Violence*, University of Iowa, September 9, 2013.

Three Main Points

1. Video games are powerful socialization tools
2. They affect gamers in many ways
3. Extreme claims aren't true.

Three Main Points: 1

- Video games are powerful socialization tools
  - Use basic principles of learning
  - Use basic principles of motivation
  - Content of game influences content of what is learned
  - Structure of game influences content-irrelevant effects.

Three Main Points: 2

- VGs affect gamers in many ways
  - Content effects: educational, health, violent, prosocial…
    - Diabetes, cancer, asthma…
    - Aggressive attitudes, beliefs, desensitization, & behavior
    - Prosocial (helping) behavior
  - Cognitive processes/skills (related to fast-paced games?)
    - Certain types of visual/spatial skills can be improved
    - Eye-hand coordination
    - Attention problems made worse (Executive function, proactive cognitive control, ADD, ADHD)
  - Other emerging effects (time related?)
    - Video game and Internet "addiction" (about 8%)
    - Poor school performance
    - Low civic engagement.

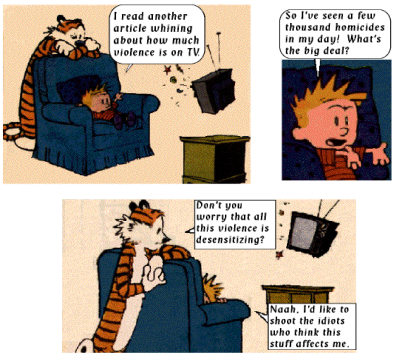
Three Main Points: 3

- Extreme claims aren't true
  - Extreme, unsubstantiated claims frequently made
    - For both positive and negative media effects
    - "Action games improve attention"
    - "Violent games cause school shootings"
    - "Only bad studies find harmful effects"
    - "Pornography reduces sex crimes"
  - Consumers, parents/future parents…need accuracy
    - Beware of poor quality sources: Industry, gaming sites, lawyers/judges, committed gamers…
    - Seek high quality sources: Mainstream researchers & research organizations, such as APA, AAP…

The Future

- Impact of electronic media will continue to increase
- Some effects will be positive, some negative
- Careful, theoretically guided research is needed
- We need to be:
  - vigilant & active
  - as parents, practitioners, community leaders and consumers
  - to ensure the healthy development of the next generation.

Calvin & Hobbes on Media Violence



Presentation Outline

Media Violence Effects

- Research evidence was clear by 1975
  - Debate still rages in some countries
- Hundreds of studies
- Numerous meta-analyses (statistical averaging)
- 2 main results:
- 1. Short term exposure ↑ aggression immediately
- 2. Long term exposure ↑ aggression into adulthood.

Media Violence Background

- Definitions
  - Aggression: Behavior intended to harm
  - Violence: Severe forms of aggression
  - Media violence: Media portrayals of intentionally harmful behavior directed at
    - real or imaginary characters
    - human or nonhuman.

First Person Shooter: Soldier of Fortune

VGclips

Third Person Shooter: Otto Matic

Kids & College

VGclips

Professional Health/Science Organizations & Media Violence

- All have concluded that the effects are real & significant
  - American Academy of Pediatrics
  - American Academy of Child & Adolescent Psychiatry
  - American Psychological Association
  - American Medical Association
  - American Academy of Family Physicians
  - American Psychiatric Association
  - International Society for Research on Aggression
  - Society for the Psychological Study of Social issues*
  - U.S. Surgeon General
  - NIH/NIMH.

The Causality Conundrum, Part 1

- Scientific "causality" is probabilistic, not "necessary & sufficient"
  - Smoking causes lung cancer
  - Not all who smoke get cancer
    - Violates sufficient causality
  - Some nonsmokers get lung cancer
    - Violates necessary causality
- Most people understand this for medical issues
- Many apply the old "necessary & sufficient" criteria when they don't like the specific case
  - e.g., Smokers & the tobacco industry on smoking issues
  - Gamers & the video game industry on video game issues.

The Causality Conundrum, Part 2

- Two types of causal factors
  - Predisposing
  - Precipitating
- Media violence
  - Primarily a predisposing factor
  - Might be precipitating in some imitation cases.

Media Violence Methods

- Triangulation
  - Multiple research methods
  - Different strengths & weaknesses
  - Look for consistency or inconsistency
  - Test plausible alternative explanations
- 3 main research designs.

3 Pillars of Causality

Also known as: 3 Types of Studies

		Correlational	
	Experimental	Cross-Sectional	Longitudinal
Advantages	Causality	Type of Aggression	Causality Type of Aggression
Disadvantages	Type of Aggression	Causality	Expensive Time Frame

Causality and the 3 Pillars

- Key goal of empirical research:
  - Test alternatives to a causal hypothesis
- The fewer plausible alternatives that remain, the greater confidence one can have in affirming the hypothesis
- Experimental studies most powerful
  - Random assignment reduces likelihood of confounds with **any** alternative causal variable
- Longitudinal studies also powerful
  - Controlling for T1 aggression also controls for alternative causes
- Cross-sectional weakest, because of potential confounds
  - But, they provide opportunity for disconfirmation
  - Also, can test specific causal alternatives.

Media Violence Results

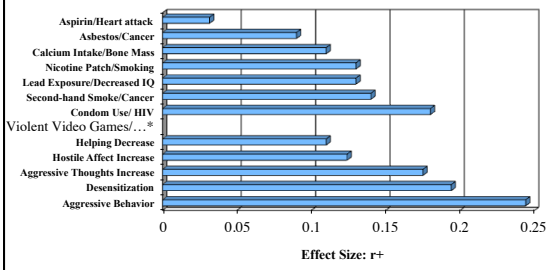
3 Types of Studies: Aggressive Behavior Results

	Experimental	Correlational: Cross-Sectional	Correlational: Longitudinal
TV, Movies...	Media violence increases aggression N > 9000	Media violence increases aggression N > 37,000	Media violence increases aggression N > 4000
Video Games	Media violence increases aggression N > 3500	Media violence increases aggression N > 60,000	Media violence increases aggression N > 5500

Five Key Questions about Violent Video Games

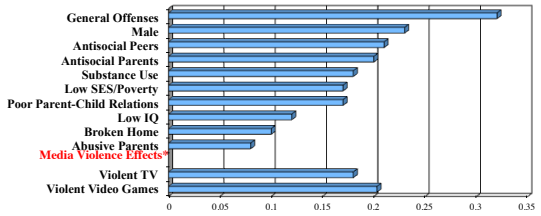
- Is the research evidence consistent?
  - **Yes**
- Do poor methods yield over-estimates of negative effects?
  - **No**
- Is there *causal* evidence?
  - **Yes**
- Is there evidence of effects on seriously aggressive behavior?
  - **Yes**
- Is there good theory?
  - **Yes.**

How "big" are the video game effects?



*From Best practices studies, Anderson et al., *Psychological Bulletin, 2010*

Some Longitudinal Risk Factors for Youth Violence



Adapted from U.S. Department of Health and Human Services (2001). *Youth violence: A report of the Surgeon General.* Rockville, MD: U.S. Government Printing Office. * TV estimate from Bushman & Huesmann, 2006, *Archives of Pediatric & Adolescent Medicine, 160,* 348-352. Video games estimate from Anderson et al. (2010) *Violent Video Game Effects on Aggression in Japan and Western Countries.*

What Can We Do?

- Three Pillars of Responsibility
  1. Television, Film, & Video Game Industries
     - Truth in labeling
     - Ethical marketing practices
     - Educating parents
  2. Retail & rental industry
     - Create appropriate access restrictions
     - Enforce them
  3. Parents
     - Educate themselves about rating systems
     - Learn why both content and amount are important
     - Act on this knowledge.

What Can We Do?

- Parents & teachers:
  1. Reduce media violence at home & school
  2. Counter-attitudinal interventions, at school & home
  3. Parental mediation with children
  4. Media literacy, emphasis on consequences & responsibility
- Health care professionals:
  1. Discuss media violence problems with patients/clients
  2. Encourage parents & school officials to take positive action
- Citizens in general:
  1. Discuss the problem with retailers
  2. Buy from helpful retailers, boycott others
  3. Let your elected officials know of your concerns and preferred solutions.

What Can We Do?

- Public Policy Options
  1. Education (PSAs, schools, PTAs, medical settings…)
  2. Voluntary industry rating systems
  3. Mandatory industry rating systems
  4. Mandatory warning labels
  5. Governmental ratings of advisory nature
  6. Governmental ratings of regulatory nature
  7. Mandatory ratings by truly independent 3rd party
  8. Legal access restrictions
- Take home message: Public Policy Issues
  1. Scientific facts are relevant
  2. Nonscientific issues are important
  3. Governmental regulation: Necessary if education and industry self-regulation continues to fail?

Example Studies

- Oxford Book studies (summary)
  - Kids & college students: Experimental study
  - High School students: Cross-sectional study
  - Kids: Longitudinal study
- Sports studies: Competition vs. Violence
- Fight or Flight
- Attention Control
- Physiological Desensitization studies
- Video games and cognition studies
- Social Neuroscience studies
- Escalation.

Screen Media & Real World Attention Problems

- Numerous cross-sectional (correlation) studies have found a link between screen time and ADD, ADHD, school problems
- Led AAP to recommend *no* screen time (TV, VG…) for those under 2 years of age
- Recent longitudinal studies—allow stronger causal conclusions.

Attention Effects of Video Game Play

- Several studies have found greater video game exposure is related to more attention problems (Anderson et al., 2012; Gentile et al., 2012: Swing et al., 2010)
- Children and adolescents
- Cross-sectional and longitudinal studies
- No experiments, until very recently.

What is "Attention"

1. Visual/spatial attention:
   - Action games improve visual attention (Useful Field of View, UFOV)
   - Cross-sectional & multi-session experiments
   - Can process more objects across greater spatial area
   - Mischaracterized by some as "improving attention"
2. Executive control (proactive, reactive) (Stroop, brain imaging)
3. Real world (school, occupation, ADD/ADHD, ability to focus on *perceptually boring* stimuli).

Attention Effects: Executive Control

•High vs. low gamers (43 vs. 1.8 hr/week), college males

•Reactive control: Just-in-time type of decision resolution

•Proactive control: Future-oriented, task preparation

•Measures: Proactive & Reactive control DVs assessed by Behavioral & Event Related Potential measures

•Results:

- •Same for Behavioral (Stroop) and Neuro (ERP) tasks
- •Reactive control: No VG effect
- •Proactive control: Low gamers better than high gamers.

Bailey, K., West, R., & Anderson, C. A. (2010).

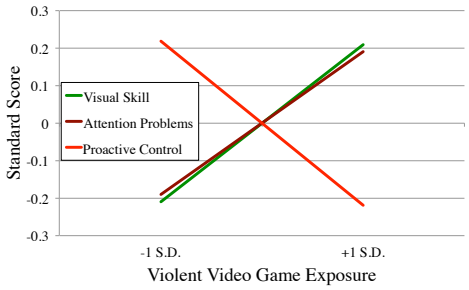
The Present Studies

- Violent/action video game effects on:
  - Self-reported attention problems
  - Proactive cognitive control
  - Visual Attention
- 2 Correlational studies
- 1 11-week experimental study.

Correlational Study 1

- 235 undergraduate students (54% female, mean age: 19.51)
- Self-report measures:
  - Violent video game game habits
  - Attention problems (ADD, impulse control)
- Behavioral performance measures:
  - Proactive cognitive control: Color Stroop
  - Visual Attention: Useful field-of-view (UFOV)
- Results: High violent gamers (sex controlled)
  - More self-report attention problems (b = .19)
  - Poorer proactive cognitive control (b = -.23)
  - Better UFOV (b = .22).

Violent Video Games & Attention



Anderson & Swing, 2013

Experimental Study

- 22 ISU students (64% female, mean age = 19.24)
- Low video game players
- Proactive cognitive control: Color Stroop
- Visual attention: UFOV
- DVs: Pre-Post change in Proactive cognitive control & in UFOV.

Random Assignment

50%
Experimental Condition:

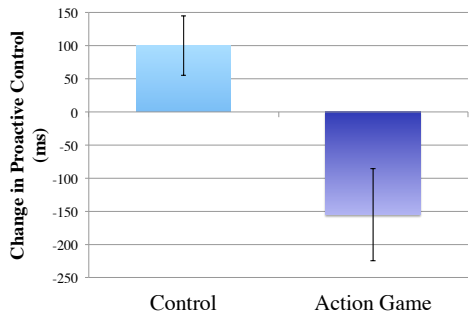
Unreal Tournament 2004
for 10 sessions (50 min.)

50%
2 Control Conditions:

50% No game
50% Sims 2
for 10 sessions (50 min.)

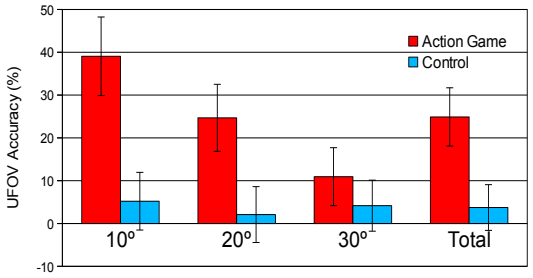
Unreal Tournament 2004 (0:25)

Proactive Cognitive Control: Change from Baseline



Swing & Anderson, 2012

Useful Field-of-View: Change from T1



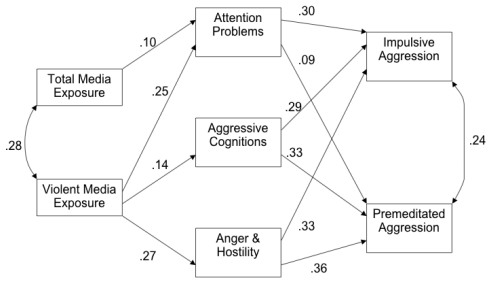
Swing & Anderson, under review 2013

- 422 ISU undergrads, cross-sectional
- Assessed TV and VG habits as predictors
  - Total time on screen media
  - Media violence exposure
- Mediating trait-like variables:
  - Attention problems: Composite of ADHD and impulsivity scales
  - Aggressive cognition
  - Aggressive feelings (anger & hostility)
- Outcome variables (trait aggression):
  - Premeditated aggression (to get something, not provoked)
  - Impulsive aggression (in response to a perceived provocation).

Skip

Swing & Anderson, under review 2013: Results

- Theoretically expected pattern was obtained



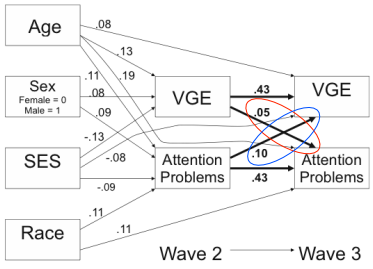
This model fit the data very well, CMIN: 15.37, *df* = 11, *p* =. 166, GFI: 0.99, AGFI: 0.97, CFI: 0.99, RMSEA: 0.032 (90% CI: 0.000, 0.066)

Longitudinal VG Effect on ADHD & Impulsivity

- 3034 8-12 year old students, Singapore, 3 Waves over 3 years
- Measured hours per week on video games
- 18-item measure of ADHD
- 11-item measure of impulsivity
- ADHD and impulsivity strongly correlated, r = .48
- School performance assessed (English, math, science, 2nd language)
- Both ADHD and impulsivity correlated with poor school performance
- Key question 1: Does time on VGs predict later ADHD and impulsivity even after controlling for age, sex, race, SES, and earlier attention problems?
- Key question 2: Do attention problems predict later use of VGs even after controlling for age, sex, race, SES, and earlier VG use?

Longitudinal VG Effect on Attention Problems

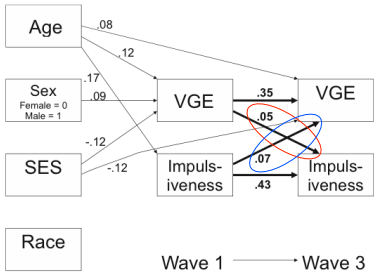
- Answer to both key questions: YES



Bidirectional causality. All paths significant, p < .05.

Longitudinal VG Effect on Impulsiveness

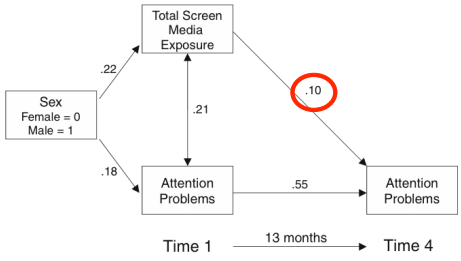
- Same basic findings for impulsiveness



Bidirectional causality. All paths significant, $p < .05$.

Longitudinal TV & VG Effects on Attention Problems

- 1323 6-12 year olds, U.S., 4 Times over 13 months



- VG time effect slightly greater harm than TV
- All paths significant, $p < .05$.

Conclusions from Recent Attention Studies

- Violent video game playing is *associated* with:
  - greater real-world attention problems
  - lower proactive cognitive control
  - superior visual attention
- Training with violent, action video games *causes*:
  - lower proactive cognitive control
  - lower PFC activity during an inhibition task
  - better visual selective attention
- Question: Do such attention & executive control problems increase aggression? School problems?

Summary: Gaming & Attention/Executive Control

- fMRI, ERP, & Stroop Reaction Time data
  - Action gamers:
    - have difficulty maintaining proactive control over time
    - working memory maintenance is attenuated
    - emotional info. processing-desensitization to violent images
    - these effects can be induced with 10 hours of training with a first-person shooter video game
    - brain function and Stroop RT patterns are very similar to conduct disorder adolescents
- ADD/ADHD linked to excessive screen time
  - Self-report, Teacher report, Diagnosis, fMRI, ERP
- Linked to aggression, especially impulsive.

Other Harmful Consequences of Excessive Screen Time

- Poorer school performance (all grade levels, Anderson et al., 2007)
- Social isolation (Bickman & Rich, 2006)
- Obesity
- Early sexual behavior
- Early alcohol use and abuse
- Illicit drug use
- Tobacco use.

Escobar-Chaves, S.L., & Anderson, C.A. (2008). Media and risky behaviors. *Future of Children, 18,* 147-180.

Choice Points

- Science & Public Policy
- Calvin & Hobbes
- Jon Stewart-Daily Show
- Media Violence as a Risk Factor
- Rating systems problems/solutions
- Violent VG & Fight/Flight
- What can we do?
- Gentile's VG addiction scale
- VG Harmful Characteristics

What Can We Do?

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- Take home message: Public Policy Issues
  1. Scientific facts are relevant
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VG Characteristics Most Likely to Cause Harm

Characteristic	Harm
Violent content	aggressive behavior, attitudes, beliefs, feelings
Criminal main character	unethical behavior, moral beliefs & attitudes
Racial, ethnic, sex stereotypes	acceptance of such stereotypes, self-image problems
Requires rapid responses	attention/executive control problems, impulsivity
Addicting ?	depression, anxiety, socialization, education, job perform…

•Reminder: There are many positive uses for video games
- •Education
- •Training
- •Socializing
- •Exercise
- •Entertainment.

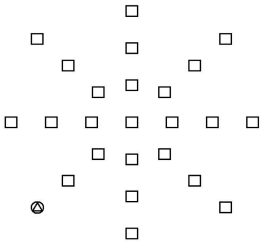
Jon Stewart—Daily Show

Useful Field of View: Overview

- Fixation point (1000 ms) in center of screen
- Target screen (17 ms)
  - 1 target: circle with triangle in it
  - 23 identical distractors (squares)
- Mask (500 ms)
- Response screen (until response is made)
- Task: In which direction did the target appear?
- Targets farther away from center are harder to see
  - 10° vs. 20° vs. 30° from center.

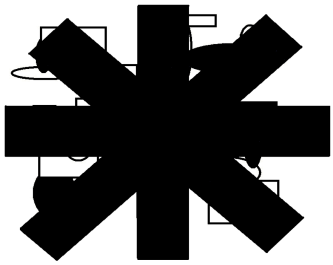
Useful Field of View: Fixation point

Useful Field of View: Target Screen

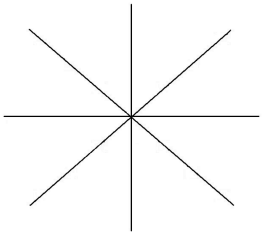


10°, 20°, 30° from center

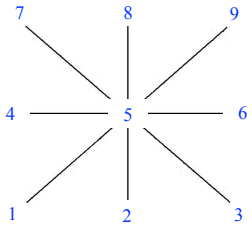
Useful Field of View: Mask



Useful Field of View: Response Screen



Useful Field of View: Response Screen with numeric key pad designators



Corr Exp

Color Stroop

- Name the color of ink in target word as quickly as possible
- Sometimes the word and the ink color match
  - Blue Red Green
- Sometimes they don't match
  - Blue Red Green
- Mismatches are harder (take longer):
  - Index of Executive Control
- Recent work in cognitive and neuroscience:
  - Proactive Control (conflict adaptation effect)
  - Reactive Control (interference effect).

Corr Exp

Corr Exp

Media Violence as a Risk Factor

- Many risk factors for aggression (dozen or so)
  - –Prior aggression level
  - –Poverty, violent neighborhood
  - –Antisocial peers
  - –Media violence…
  - –Extreme violence usually requires multiple risk factors
  - –Less extreme aggression requires fewer risk factors
- Media violence is particularly interesting
  - –Huge proportion of population is exposed
  - –Effects accumulate (much like cigarettes & cancer)
  - –Easy and inexpensive for parents to reduce exposure.

Media Violence as a Risk Factor

- But, parents fail to monitor/control
- Multiple reasons
  - –Media industries spend a lot attacking research
  - –U.S. news media portray scientific findings *inaccurately*
  - –Many people find it upsetting to think they might have harmed children
  - –Personality changes accumulate unnoticed (self & others)
  - –Ratings system shortcomings.

Gentile's Video Game Addiction Scale

- 1. During the past year, have you become more preoccupied with playing video games, studying video game playing, or planning the next opportunity to play? Yes No Sometimes
- 2. In the past year, have you needed to spend more and more time and/or money on video games to achieve the desired excitement? Yes No Sometimes
- 3. In the past year, have you ever felt you could not stop playing video games? Yes No Sometimes
- 4. In the past year, have you become restless or irritable when attempting to cut down or stop playing video games? Yes No Sometimes
- 5. In the past year, have you ever lied to family or friends about how much you play video games? Yes No Sometimes
- 6. In the past year, have you ever committed illegal/unsocial acts such as theft from family, friends, or elsewhere to get video games? Yes No Sometimes
- 7. (For students) In the past year, have you ever done poorly on a school assignment or test because you spent too much time playing video games? (For nonstudents) In the past year, has your work ever suffered (e.g., postponing things, missing deadlines, being too tired to function well, etc.) because you spent too much time playing video games? Yes No Sometimes
- 8. In the past year, have you ever needed friends or family to help you financially because you spent too much money on video game equipment, software, or game/Internet fees? Yes No Sometimes
- 9. In the past year, have you damaged or lost a significant relationship with someone because of your video gaming? Yes No Sometimes
- 10. In the past year, have you played video games as a way of escaping from problems or bad feelings? Yes No Sometimes

Current Video Game Rating System

- Games rated "E" (Everyone) can contain:
  - Cartoon or Mild Cartoon Violence
  - Fantasy or Mild Fantasy Violence
  - Mild Violence
  - Violence
- Only 2 types absent from "E" game descriptors:
  - Intense Violence
  - Sexual Violence
- 31% of "E" games contain violence
- 91% of "E10" games contain violence
- 91% of "T" games contain violence
- 89% of "M" games contain violence.

Analysis on 10/1/06 of ESRB web site.

Common Assumptions

- "E" rated video games are safe, nonviolent
- Children are more susceptible
- Boys are more susceptible
- Aggressive individuals are more susceptible
- Little or no evidence.

Kids & College Students: Methods

- 161 children (9-12) and 354 youths (17+)
- Randomly assigned games, 20 minutes
  - Nonviolent game (Lemmings)
  - "E" violent game (Otto Matic, Capt. Bumper)
  - "T" violent game (17+ only, Future Cop, Street Fighter)
- Competitive Reaction Time task
  - Valid lab measure of aggressive behavior
  - Participants punish opponents, 25 trials
- Potential moderators/covariates
  - Sex, trait aggression, age, adult involvement.

Kids & College Students: Experimental Results

- DV: # high intensity noise blasts (> 7)
- Males > females: 8.26 vs. 3.34, $p < .001$
- Greater adult involvement → less AB, $p < .05$
- Violent "E" games (6.64) > nonviolent (4.57), $p < .005$
- "E" violent and "T" violent games: equal
- No moderator effects of:
  - Sex
  - Age
  - Trait aggressiveness
  - Media violence exposure
  - Media violence preference.

Kids & College Students: Regression Results

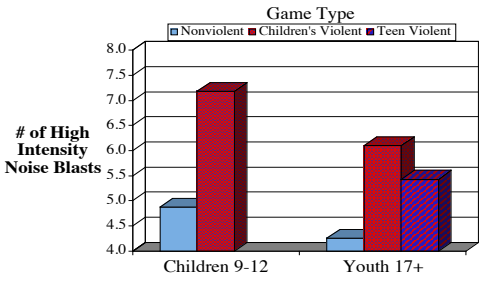
- DV: History of violent behavior
- Media violence exposure ↑ violent behavior
- No moderator effects of sex or age
- Adult involvement moderated the effect
  - High adult involvement reduced the MVE effect
- Video game violence effect was somewhat larger than the TV/film violence effect.

Kids & College Students: Key Findings

- Immediate effects:
  - –Violence in "E" games ↑ aggression 45%
  - –No evidence of "safe" populations
  - –"E" violence effect as big as "T" violence
- Long term effects:
  - –VG violence worse than TV/movie violence
  - –No evidence of "safe" populations
  - –Adult involvement may mitigate effects.

Anderson, Gentile, & Buckley, 2007, Oxford University Press.

Short Term Video Game Effects

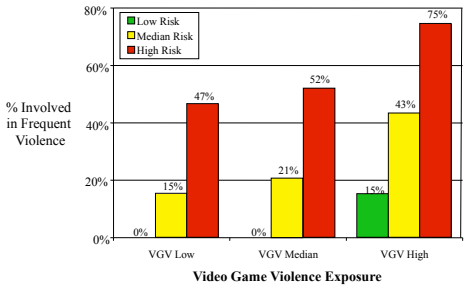


Anderson, Gentile, & Buckley, 2007, Oxford University Press.

High School Students

- 189 9th-12th graders, small Iowa high schools
- Assessed:
  - Video game violence exposure
  - Physically aggressive behavior
  - Violent behavior
- Other Risk Factors
  - Aggressive norm beliefs
  - Positive orientation to violence
  - Sex of participant
- Results ➔

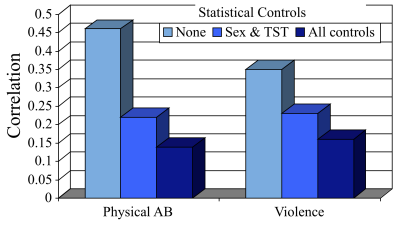
High School Students



Anderson, Gentile, & Buckley, 2007, Oxford University Press. Outcome variable is > 8 acts.

High School Students

Video Game Violence Effects on Physical Aggression and Violence



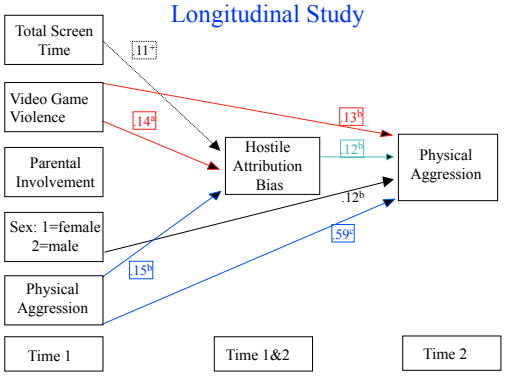
All VGV effects are significant.

Anderson, Gentile, & Buckley, 2007, Oxford University Press.

Longitudinal Study

- 430 3rd to 5th Graders (9-12 years)
- Assessed Twice about 5 months apart:
  - Video game violence exposure
  - Physically aggressive behavior (peer, teacher, self-fights)
- Other predictors & mediators
  - Sex
  - Total screen time
  - Parental involvement
  - Aggressive norm beliefs
  - Hostile attribution bias
- Results ➔

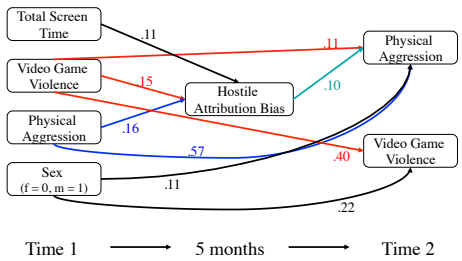
Longitudinal Study



$^{+}p < .10$, $^{a}p < .05$, $^{b}p < .01$, $^{c}p < .001$

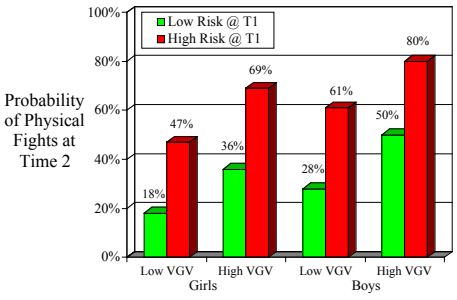
Anderson, Gentile, & Buckley, 2007, Oxford University Press.

Predicting Time 2 Aggression & VGV



All paths are significant. AGFI = .976, RMSR = .02, Chi-Square p > .45.
Based on data from Anderson, Gentile, & Buckley, 2007.

Longitudinal Study



Time 1 Video Game Violence Exposure

Anderson, Gentile, & Buckley, 2007, Oxford University Press.

More Video Game Clips

- Video Games of the 1990s
- Mortal Kombat Trilogy (T)
- Wolfenstein 3D (M)
- Soldier of Fortune (M)
- Manhunt-Wii (M)
- Duke Nukem 3D (M)
- Grand Theft Auto 3 (M)
- Unreal Tournament (M)
- Quake III (M)
- Full Spectrum Warrior (M)
- Marathon (M)
- Future Cop (T)
- Blitz football (M)

- BMX xxx (M)
- VG Women of 2002
- Women of GTA
- Women of Duke Nukem
- GTA Hot Coffee (AO)

- Glider Pro (E)
- Oh no! More Lemmings! (E)
- Myst (E)
- 3D Ultra Pinball (E)

- Captain Bumper (E)
- Street Fighter (E)
- Otto Matic (unrated kid game)

Manhunt-Wii

VGV example VGclips

Street Fighter

VGclips Kids & College

Other Dangers of Excessive Gaming

- Attention & Control problems
  - Especially proactive executive control
    - Bailey, West & Anderson, 2010, 2011
      - ERP & Stroop RTs
  - ADD/ADHDA (e.g., Swing et al., 2010)
    - Self-report, Teacher report, Diagnosis, fMRI, ERP
- Video Game Addiction
  - Gentile, 2009: about 8%
- Poor school performance
  - All grade levels (AGB07)
  - Weis & Cerankosky (2010) experiment.

Gaming & School Performance

- High gaming → poor school performance
  - All grade levels, elementary school – college
  - Multiple cross-sectional studies
- Weis & Cerankosky (2010) experiment
  - 6-9 year old boys
  - Randomly assigned to receive a PlayStation II
    - Either at beginning of study, or end (4 months)
  - Game play (min./day): PSII=39, Control=9
  - After-school academics: PSII=18, Control=32
  - Reading scores (adjusted): PSII=96, Control=102
  - Writing scores (adjusted): PSII=95, Control=101.

Other Harmful Consequences of Excessive Screen Time

- Poorer school performance (all grade levels, AGB, 2007)
- Social isolation (Bickman & Rich, 2006)
- Obesity
- Early sexual behavior
- Early alcohol use and abuse
- Illicit drug use
- Tobacco use.

Escobar-Chaves, S.L., & Anderson, C.A. (2008). Media and risky behaviors. *Future of Children, 18*, 147-180. Special issue on Children and Electronic Media.

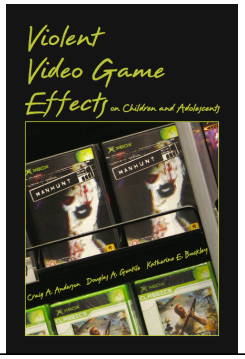
Conclusions

- Culture is passed on through its stories
- Most children get most of their stories from electronic media
- If society wants to reduce aggression and violence, it must change these stories .

What Works?

- Adult involvement
- Reduce total screen time
- Reduce violent screen time
- Substitute positive games/TV/films
- Substitute real interpersonal activity (peers, family)
- Read to your kids, have them read to you
- Teach nonviolent problem solving at every opportunity.

Oxford University Press, 2007



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