Prospective Investigation of Video Game Use in Children and Subsequent Conduct Disorder and Depression Using Data from the Avon Longitudinal Study of Parents and Children

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1,815 children from the Avon Longitudinal Study of Parents and Children (ALSPAC)

## Implications For Parents About

Parental practices / parental mediation

# Abstract

There is increasing public and scientific concern regarding the long-term behavioural effects
of video game use in children, but currently little consensus as to the nature of any such
relationships. We investigated the relationship between video game use in children, degree
of violence in games, and measures of depression and a 6-level banded measure of conduct
disorder. Data from the Avon Longitudinal Study of Parents and Children were used. A
3-level measure of game use at age 8/9 years was developed, taking into account degree of
violence based on game genre. Associations with conduct disorder and depression, measured
at age 15, were investigated using ordinal logistic regression, adjusted for a number
of potential confounders. Shoot-em-up games were associated with conduct disorder
bands, and with a binary measure of conduct disorder, although the strength of evidence for
these associations was weak. A sensitivity analysis comparing those who play competitive
games to those who play shoot-em-ups found weak evidence supporting the hypothesis
that it is violence rather than competitiveness that is associated with conduct disorder. However
this analysis was underpowered, and we cannot rule out the possibility that increasing
levels of competition in games may be just as likely to account for the observed associations
as violent content. Overall game exposure as indicated by number of games in a household
was not related to conduct disorder, nor was any association found between shoot-em-up
video game use and depression.

# Outcome

"Our results indicate that playing video games that are more likely to include violent content
(i.e., shoot-em-ups) in childhood is weakly associated with an increased risk of conduct disorder
in late adolescence. There was also weak evidence that individuals who selectively play
shoot-em-ups differed in risk to those who selectively play competitive games. However, the
absolute risk of developing conduct disorder is small, and the modest effect sizes we observed
should be interpreted in this context. Overall game exposure, as indicated by number of games
in a household, was not related to conduct disorder, nor was any association found between
video game use and depression. While our results are broadly in line with findings suggesting that violent game content is associated with increased aggressive tendencies, the associations we observe (and statistical evidence for these) are modest, and do not seem to be consistent with claims that the effects of playing violent video games on aggressive behaviour are of a sizeable magnitude." (Etchells et al, 2016: 7). "Although there is a weak association
between playing shoot-em-ups at a young age and subsequent negative behaviours, the
effect is small and the statistical evidence for these associations is weak. Moreover, there was
only very weak evidence that individuals who selectively played shoot-em-up games (which we
considered in our analysis as the more violent genre) differed in risk from those individuals
who selectively played competitive games, suggesting that violent video game content alone
may not be a sufficient indicator of risk for later aggressive behaviour. Furthermore, given that
in the present study we do not consider the impact of media exposure aside from video games,
an assumption that any association between violent game use and aggression is causal [27] is
inappropriate here." (Etchells et al, 2016: 8).