CHILDREN & MEDIA AUSTRALIA

Thriving in a digital world

5 April 2023

James Blair

Administrative Officer

Senate Standing Committees on Education and Employment
Email: eec.sen@aph.gov.au

Dear Sir

Re: the Senate Committee on Education and Employment

Inquiry into the issue of increasing disruption in Australian school classrooms.

Children and Media Australia (CMA) welcomes this opportunity to make representation to the Committee on this concerning issue. The focus of our submission is the contribution that screen violence can be making to aggressive and violent behaviour in students.

CMA is a peak not-for-profit national community organisation whose mission is to support families, industry and decision makers in building and maintaining a media environment that fosters the health, safety and wellbeing of Australian children.

CMA membership includes ECA (Early Childhood Australia), ACSSO (Australian Council of State Schools Organisations), APPA (Australian Primary School Principals Association), AHISA (Association of Heads of Independent Schools Australia), AEU (Australian Education Union), Parenting Research Centre, Council of Mothers' Union in Australia, SAPPA (South Australian Primary Principals Association), and other state-based organisations and individuals.

CMA's core activities include the collection and review of research and information about the impact of media use on children's development, and advocacy for the needs and interests of children in relation to media use.

This submission has been written by CMA President, Professor Elizabeth Handsley and Hon CEO, Barbara Biggins OAM. It has reference to the expertise of CMA's Vice President, Assoc. Professor Wayne Warburton (Macquarie University), a long-time, internationally respected researcher into screen (including video game) violence.

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In summary

In general, the evidence from the reliable body of research on the potential influence of screen violence on young people's development is compelling. (Ref: Plante et al 2020; Anderson et al, 2017, 2003; Bushman et al 2018; Huesmann, 2006; Gentile, 2003)

Screen violence is a contributor to the incidence of violence in real life, and the size of the effect of that contribution to real life violence has been estimated at around 10% across a range of study methodologies and populations (Anderson & Bushman, 2002b; Anderson et al., 2003)

Short-term exposure to media violence risks increasing the predisposition to act aggressively for both children and adults.

Repeated exposure to media violence is likely to have further deleterious effects, including:

- greater fear;
- a hostile bias whereby others are seen as threatening and dangerous;
- desensitisation to further depictions of violence'
- beliefs normalising aggression; and
- detailed and generalised scripts for aggressive behaviour.

(Plante et al 2020; Bushman et al 2018; Anderson & Bushman, 2002a; Anderson & Gentile, Bushman & Huesmann, 2006; Donnerstein, Slaby & Eron, 1994; Strasburger & Wilson, 2003).

The research does not suggest that all children are vulnerable to exposure to screen violence, or that every child who plays violent videogames, for example, will be more aggressive. However, such exposure has been shown to be a risk factor for the development and use of aggression. There are many such risk factors, some of which are out of anybody's control. Media violence, by contrast, is a factor that we can do something about.

Detailed comment

Exposure to screen violence

Australian children and young people are heavy users of screen content across many platforms, and have access to a huge range of screen content via streaming services within their homes. Australia's eSafety Commissioner says teens spend an average of 14.4 hours per week online. It is unclear whether this figure includes time spent on games.

The IGEA Digital Australia 2022 report shows that those under the age of 18 are the most active in connecting with games. Within these age groups, 78% of children and teens under the age of 19 years play. The age group 15-24 years plays games more than any other group; the average time that children play daily is 106 minutes, with males 15-24years engaging for 128 minutes per day (page 24).

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Action, adventure and first person shooters are the 2, 3 and 4th are the categories most preferred by all groups. (p29). Most of these categories of games include violence.

Results from the research on screen violence

Research into the impacts of screen violence has been conducted for over 30 years.

> *The pattern of results for different outcomes and research designs (experimental, cross-sectional, longitudinal) … strongly suggests that exposure to violent video games is a causal risk factor for increased aggressive behaviour aggressive cognition, and aggressive affect and for decreased empathy and prosocial behavior. …It is not surprising that when the game involves rehearsing aggressive and violent thoughts and actions, such deep game involvement results in antisocial effects on the player…*
> (Plante et al 2020, #27), Anderson, et al., 2007; Barlett et al., 2009; Gentile & Gentile, 2009).

Who is more at risk?

Most of the evidence in more recent studies suggests that short term impacts (see Summary) occur regardless of age, gender, and socio-economic status, and that this flows on to long term effects as well. Human brains tend to be similar in construction and processing, and so one would not expect big differences in gender, age and so on.

What content raises risk?

Games with more depictions of blood, and where violence is rewarded, seem to have stronger effects. There is growing evidence that interactivity produces stronger effects than passive exposure, but this research stream is just over a decade old (compared to 40+ years for TV and movie effects) and more research is needed to verify this effect.

The way screen violence influences the brain

> *With regard to repeated watching and viewing:*
>
> *Two models of media effects have been being particularly influential… a General Learning Model (GLM) [has been developed] that demonstrates ways in which aggressive media content is internalised, primarily through the development of aggressive schemas and scripts. This feeds into a more general model of aggression (the General Aggression Model: GAM) in which it is posited that in an instance of aggressive behaviour: (1) there is a situational trigger such as a provocation, coupled with a person's own characteristics which make them more or less predisposed to aggress, (2) various cognitions (memories, beliefs, expectations, action tendencies) and feelings (such as anger or frustration) are aroused, along with bodily forms of arousal, and (3) depending on a number of factors the person may act on their immediate impulse (to aggress) or think through their response (usually reducing the likelihood of an aggressive response).*

Those with a high exposure to violent media are more predisposed to aggress because they have more readily accessible scripts for aggressive behaviour, have more triggers for aggressive behaviour, and have more aggression-related cognitions that can be activated (e.g., memories, concepts, scripts, schemas, action plans). Also influential is Script Theory, put forward by Rowell Huesmann and colleagues. In this theory, violent media (1) provides clear scripts for aggressive behaviour (i.e., the situations in which one should respond aggressively and the manner of that aggressive response), as well as (2) a range of aggressive problem solving strategies and (3) beliefs normalising the use of aggression to solve interpersonal problems or to obtain what one wants.

Overall, psychological research shows that the content of media is crucial. Exposure to antisocial media affects the person's neural network so that it becomes laden with aggression-related concepts and feelings, aggressive strategies for problem solving, memories about aggressive behaviour, aggression-approving beliefs, scripts for aggressive responding, triggers for aggressive responses, and aggressive action tendencies. Such effects are hardly surprising, as they involve the same processes by which all parts of human experience are laid down in the brain. Similar principles underlie the pro-social effects of exposure to pro-social media.

(Warburton, W 2010)

For additional discussion on this issue see Appendix1.

Are there sceptics?

There are those who dispute the evidence of harm from media violence, and in particular, from violent computer games. (eg Kutner and Olson 2008), Ferguson CJ 2015, 2011). Their criticisms generally dispute the methodology used.

However, what is important is that data from a range of research methodologies converges to the same conclusions – the ones we have noted. Each methodology has its strengths and weaknesses, but a convergence of evidence gives pretty compelling evidence that the findings have considerable validity and may be trusted. Especially given the numbers - thousands of papers. Government policy decisions, as well as the decisions of media outlets, parents, and others responsible for the development of our children, should be more based on what we know about the risks of violent media exposure.

What all can do to reduce risk from screen violence

1. Recognise and promote the recognition of the well established risks that ongoing exposure to screen violence raise for children and adolescents
2. Take steps to minimise such exposure by:

   * supporting the growing call for revision of Australia's National Classification Scheme so that it is evidence based, implemented across media platforms and well promoted; and

   * Encouraging and supporting parents and carers to use classification information

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Further reading

Anderson, C. A., Suzuki, K., Swing, E. L., et al 2017).
Media violence and other aggression risk factors in seven nations.
Personality and Social Psychology Bulletin, 43, 986-998

Bushman, B. J., Coyne, S. M., Anderson, C. A., et al (Jul 2018) Risk factors for youth violence: youth violence commission, International Society For Research On Aggression (ISRA)
Aggressive Behavior. 44, 4, p. 331-336

Coyne, SM; Warburton, W; Swit, C); Stockdale, L; Dyer, WJ (2023)
Who is Most at Risk for Developing Physical Aggression After Playing Violent Video Games? An Individual Differences Perspective From Early Adolescence to Emerging Adulthood
Journal of youth and adolescence **DOI:** 10.1007/s10964-023-01739-0 **Early Access Date:** FEB 2023

Handsley, E. & Warburton, W., 2 Jan 2022
'Material likely to harm or disturb them': testing the alignment between film and game classification decisions and psychological research evidence.
In: Psychiatry, Psychology and Law. 29, 1, p. 68-92

Plante, Courtney; et al (2020)
Game On! Sensible answers about Video Games and Media violence
Zengen llc

Warburton, W. A. & Anderson, C. A., 2022, *Encyclopedia of violence, peace and conflict .* Kurtz, L. R. (ed.). 3rd ed. Amsterdam, Netherlands: Elsevier Academic Press, Vol. 4. p. 195-208

Appendix 1. The development of a mental script for ways to react to conflict

(with reference to Warburton 2010)

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When a heavy consumer of violent media encounters a similar problem to one already encountered in a previous media experience, a script for behaviour is chosen and enacted. Aggressive belief systems reduce resistance to the script by reducing the influence of non-aggressive social norms, and a lack of alternative, non-aggressive solutions also makes the enactment of the aggressive script more likely.

Underlying both the GLM/GAM and Script Theory is the notion of neural connectivity. When we encounter an experience, neurons are set aside to recognise it again. The colour red, what bread smells like, the feeling of shame, what a gun is. On the next experience of that particular thing, the same neurons fire again in recognition. Experiences that happen together become neurally connected together. So, if we see the colour red as blood a number of times, seeing the colour red in any circumstance will also activate the neurons for blood, increasing the likelihood that we will think of blood when we sense the colour red. If a particular group of experiences occur together regularly, they form a discrete knowledge structure called a schema. For example, after enough trips to the supermarket, just seeing the supermarket sign will activate a supermarket schema and the rest happens automatically. We know where most things are, what is expected of us, and what we can expect to happen, without thinking about it. We also know roughly what will happen over time. This is the script. Go through the gate. Pick up a basket. Fruit and vegetables in the first aisle. Milk at the back. Buy a chocolate near the front register. Line up and pay. Feel shock at the unexpectedly high cost. Walk back to the car.

Schemas and scripts may be triggered by exposure to a number of the component elements in the knowledge structure, and are usually activated automatically and outside of conscious awareness. Activated schemas and scripts have a strong influence on behaviour, because they contain action tendencies along with the other components. From what we know of neural connectivity, it is reasonable to assume that people with a high exposure to violent media have: - A large number of concepts for aggressive behaviour stored in their neural network; - A large number of triggers for those concepts; - Strong neural connectivity between the concepts that are activated together a lot; - A number of aggressive schemas and scripts made up of discrete structures of concepts that are regularly activated together; - Various aggressive schemas that are easily activated in life. This is because those schemas are frequently activated during media experiences (e.g., a violent video game where similar scenes are played frequently), and are activated by a range of life experiences which may include triggers like those in the game (the trigger may be something as simple and as general as frustration).

A large body of research supports these assumptions. Indeed, evidence for all of the models and processes thus far described is considerable and comes from a wide range of research methods – experimentation, correlation, observation, case studies, interviews and longitudinal studies (some of which have the followed the course of aggressive behaviour in the same individuals for almost 50 years).

Overall, psychological research shows that the content of media is crucial. Exposure to antisocial media affects the person's neural network so that it becomes laden with aggression-related concepts and feelings, aggressive strategies for problem solving, memories about aggressive behaviour, aggression-approving beliefs, scripts for aggressive responding, triggers for aggressive responses, and aggressive action tendencies. Such effects are hardly surprising, as they involve the same processes by which all parts of human experience are laid down in the brain.

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