



Screen violence changing young brains: researchers

Rachel Browne

Heavy exposure to screen violence in adolescence is changing the development of young people's brains, leading to increased aggression and reckless behaviour and decreased empathy.

Evidence presented at the Australian Council on Children and the Media conference in Sydney on Friday showed brain imaging studies which recorded the way violent material changes brain activation in the short term and brain function in the long term.

Experiencing screen violence reduces the development of the frontal lobe, which is responsible for impulse control and inhibits aggression, according to research presented by Dr Wayne Warburton, deputy director of the Children and Families Research Centre at Macquarie University.

Exposure to violent material also activates the brain's limbic system, which is responsible for emotional response and memory.

Dr Warburton said that images of violence could be

stored in the brain in the same way that post-traumatic stress disorder patients store memories of trauma.

Violent films and games such as Grand Theft Auto and World of Warcraft also activate the brain's right hemisphere, which controls negative feelings such as anger, jealousy and sadness.

The impact on the brain is cumulative, with the heavier the exposure, the more severe the changes.

Dr Michael Nagel, associate professor of education at the University of the Sunshine Coast, said the two most vulnerable periods in brain development were in early childhood and puberty. The peak age for video game usage is from 11-14 years.

"What you are exposed to in adolescence is hard-wired into the developing brain," he said. "We are only beginning to see the impact of technology on the human brain."

He said games were becoming more extreme, citing a Japanese game in which players could create their own woman before rap-

ing her, with virtual victims as young as 10.

"We are kidding ourselves if we think that's not going to have an effect on the developing minds of young people and adolescents," he said.

"What you put in is what you get out. If you believe otherwise, you are living on a different planet."

Baroness Susan Greenfield, professor of pharmacology at Oxford University, warned that the community needed to be much more vigilant in monitoring children's exposure to screen violence.

"We can't just put our hands over our ears and say everything is fine," she said.

Australia's biggest gaming event, EB Games Expo, opened on Friday with organisers placing age restrictions on attendees. Children under 15 are permitted to attend only if they are accompanied by a parent or guardian with organisers warning the police may be called if they are found unattended.

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