## Os efeitos dos jogos electrónicos com equipamento de Realidade Virtual na activação fisiológica, estruturas cognitivas, estado emocional e comportamento agressivo

## **Results:**

Using the General Aggression Model (GAM) framework, developed by Anderson and colleagues, the current experiment was conducted to analyze the short-term effects of violent electronic games, played with or without a virtual reality device, on the instigation of aggressive behaviour under provocation.

Physiological arousal (heart rate), priming of aggressive thoughts, and state hostility, were measured to test their possible mediation on the relationship between playing the violent game and aggression, as is predicted by the GAM. The participants - 147 undergraduate students - were randomly assigned to four treatment conditions: two groups played a violent computer game (Unreal Tournament), and the other two a non-violent game (Motocross Madness).

Among those who played the violent game, half used a virtual reality device and the remaining participants played on the computer screen. The game effects were assessed by an emotional Stroop task (using affective words) to analyze the priming of aggressive thoughts, a self-report state hostility scale to rate hostility, a BIOPAC System MP100 to measure heart rate, and a Competitive Reaction Time Task (according to Taylor Aggression Paradigm) to evaluate aggressive behaviour. The main results indicated that the effect of violent computer game on aggression may be explained by the mediation of the perceived state hostility.

## **Published work:**

Arriaga, P., Esteves, F., Carneiro, P., & Monteiro, M. B. (2008). Are the effects of unreal violent videogames pronounced when playing with a virtual reality system? Aggressive Behavior, 34 (5), 521-538

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