

## Public Abstract

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Title:Game violence, game difficulty, and 2D:4D digit ratio as predictors of aggressive behavior

Previous research efforts have sought to determine whether violent video games cause increases in aggressive behavior. The resulting literature is controversial. Those finding the effect may not have the desired degree of experimental control, while those not finding the effect may not always have the required statistical precision. Game difficulty is also thought to potentially cause changes in aggression. Finally, prenatal testosterone exposure, as measured by the ratio of lengths of the index and ring fingers (2D:4D digit ratio), is thought to cause dispositional increases in aggressive behavior. In the present research, game violence and game difficulty were manipulated in a tightly-controlled modified-game paradigm. Participants played a game, were provoked, and then had an opportunity to aggress against another participant in the study. Neither game violence nor game difficulty was found to influence aggressive behavior in a theory-consistent way, and Bayesian model comparison techniques favored the null hypothesis over all theory-derived alternative hypotheses. Similarly, 2D:4D ratio did not predict aggressive behavior, either alone or in interaction with the other study variables. The results suggest that brief exposure to violent or difficult games does not influence aggressive behavior when game stimuli are closely matched, and furthermore, that 2D:4D digit ratio does not predict aggression.