The Role Behavioral of Activation and Inhibition in Explaining Adolescents’ Game Use and Game Engagement Levels

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* Risks and harms
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## Sample

1,016 adolescents between the ages of 14 and 16 years old of which 50.3% were male with different education types from 20 schools in Belgium

## Implications For Stakeholders About

Industry

# Abstract

According to Gray’s reinforcement sensitivity theory, variations in
the functioning of two neuropsychological systems, the behavioral
approach (BAS) and inhibition (BIS) system, can result in individual differences in personality. Several studies have looked at asso\_x0002\_ciations between personality and media use but media research
integrating BAS and BIS is scarce. The current cross-sectional survey
study (n = 1016) representative for Belgian adolescents investigated
associations between BAS and BIS and game use and game engagement in adolescents. Results showed that BAS was positively
associated with playing both violent and nonviolent games. BIS was
negatively associated with violent game use while it was positively
associated with nonviolent games. Also, BAS was positively asso\_x0002\_ciated with game engagement. No association was found between
BIS and game engagement. Game engagement was shown to mediate the relationship between BAS and playing both violent and
nonviolent games. Based on these results, the present study argues
that integrating the reinforcement sensitivity theory in media
research makes an important contribution to the understanding of
the link between personality and game engagement and game use.

# Outcome

"People with high BAS scores are very sensitive for rewarding stimuli and are therefore likely to engage in reward-oriented behavior and develop reward conditioned behavior since dopaminergic brain regions by which BAS is driven are activated during game play. BAS explains more variance of the violent gaming model than of the non-violent gaming model. This might be explained by the higher level of competition that is usually present in violent games. Individuals with a high BAS are constantly in search for new rewards which might be offered to them by the heightened presence of competitive aspects in violent games. They also appear to be more likely to get caught up in the virtual reality offered by a game. On the contrary, individuals with higher BIS scores would be less likely to get highly engaged during game play because of their need to scan the environment for possible danger and their tendency to be constantly aware of their surroundings. Therefore, in order to maximize the likelihood that people play games, developers of serious games and prevention workers need to take into account the importance of game engagement as a determinant for game play for people with a high BAS, especially given that individuals with a high BAS have been shown to be more likely to engage in risky behavior." (Vangeel et al., 2017, p. 132-135)