

Bilingual Children, Jealous Dogs, and Gender Stereotypes: Our Most Impactful Articles in 2021

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New research findings from the field of psychological science have direct bearing on critical problems in society and continue to shape our understanding of human behavior. Results published in APS journals over the course of 2021 are prime examples and shed new light on important topics such as the impact of the COVID pandemic, child development, and the impact of social media on learning and behavior.

On *Under the Cortex*, listen to a podcast about the top stories from the world of psychological science in 2021, [featuring APS's Charles Blue, director of media relations and public information, and Ludmila Nunes, senior science writer.](#)

The following APS articles were selected as among the most impactful, based on [Altmetric Attention Scores](#)—a weighted approximation of all the attention a research output gathered online, including shares and mentions in social media as well as citations—and illustrate the critical role that psychological science plays in studying human cognition.

[**The Bilingual Advantage in Children's Executive Functioning Is Not Related to Language Status: A Meta-Analytic Review**](#)

Cassandra J. Lowe, Isu Cho, Samantha F. Goldsmith, and J. Bruce Morton

A common idea is that bilingual children, who grow up speaking two languages fluently, perform better than monolingual children in diverse executive-functioning domains (e.g., attention, working memory, decision making). This meta-analysis calls that idea into question. Bilingualism does not appear to boost performance in executive functions that serve learning, thinking, reasoning, or problem solving.

Dogs Mentally Represent Jealousy-Inducing Social Interactions

Amalia P. M. Bastos, Patrick D. Neilands, Rebecca S. Hassall, Byung C. Lim, and Alex H. Taylor

Dogs can experience and show jealousy, this research suggests. Jealousy emerged when dogs' human companions interacted with a social rival—a toy that looked like a dog—and as a consequence of that interaction.

The Psychological Burden of the COVID-19 Pandemic Is Associated With Antisystemic Attitudes and Political Violence

Henrikas Bartusevičius, Alexander Bor, Frederik Jørgensen, and Michael Bang Petersen

Despite low overall levels of antisystemic attitudes and intention to participate in political violence, higher perceptions of COVID-19 burden appear to be associated with higher levels of antisystemic attitudes and intention to participate in political violence (but not in peaceful activism). These findings suggest that pandemic management might need to include prevention of citizens' alienation.

Bedtime Music, Involuntary Musical Imagery, and Sleep

Michael K. Scullin, Chenlu Gao, and Paul Fillmore

Individuals who frequently listen to music reported persistent nighttime earworms (i.e., involuntary musical imagery) and poor sleep. A lab experiment revealed that listening to instrumental-only versions of popular songs before bedtime (compared with lyrical versions) increased the incidence of nighttime earworms, decreasing sleep quality.

There Is No Evidence That Associations Between Adolescents' Digital Technology Engagement and Mental Health Problems Have Increased

Matti Vuorre, Amy Orben, and Andrew K. Przybylski

In the last decade, technology use appears to have become less associated with depression, but social-media use has become more associated with emotional problems. This research did not find consistent strengthening of technology's relations with mental health over time. However, drawing firm conclusions about this relationship (or lack of) might be premature.

Don't Ditch the Laptop Just Yet: A Direct Replication of Mueller and Oppenheimer's (2014) Study 1 Plus Mini Meta-Analyses Across Similar Studies

Heather L. Urry et al.

In Mueller and Oppenheimer's 2014 study, participants watched a lecture, took notes by hand or using a laptop, and responded to a quiz. In both the original study and this replication, participants who used the laptop typed more verbatim words from the lecture but, in this replication, reproducing more verbatim words was less likely to lead to worse quiz performance than in the original study.

The Dramatic Impact of Explicit Instruction on Learning to Read in a New Writing System

Kathleen Rastle, Clare Lally, Matthew H. Davis, and J. S. H. Taylor

Explicitly teaching writing regularities might help learners more than letting them discover those regularities by themselves, this study suggests. Almost all the participants who received explicit instruction about an artificial language system were able to generalize the regularities in the novel words, whereas only 25% of the participants who learned through experience were able to do so.

Lay Beliefs About Gender and Sexual Behavior: First Evidence for a Pervasive, Robust (but Seemingly Unfounded) Stereotype

Jaimie Arona Krems, Ahra Ko, Jordan W. Moon, and Michael E. W. Varnum

Both genders appear to stereotype women (but not men) who engage in casual sex as having low self-esteem, although this sexual behavior does not appear to be related to self-esteem. This stereotyping persists even when participants were explicitly told that the behavior was a woman's choice.

The Effects of Handwriting Experience on Literacy Learning

Robert W. Wiley and Brenda Rapp

Handwriting might lead to faster learning of new letters and greater generalization to untrained tasks than typing or visually learning (i.e., detecting and matching letters), this research suggests. When trained to identify and learn Arabic letters, those who learn by handwriting appear to learn it faster than those who learn by typing or visually matching.

Misogynistic Tweets Correlate With Violence Against Women

Khandis R. Blake, Siobhan M. O'Dean, James Lian, and Thomas F. Denson

Misogynistic tweets in different areas across the United States appeared to be related to domestic

violence in those areas. Although these findings do not suggest that misogyny on social media causes violence against women, they do suggest that expressing prejudice against women tends to co-occur with domestic violence.