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## Singapore: NTU Study Shows Deepfake Exposure Shapes Beliefs

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A new study by Nanyang Technological University (NTU Singapore) reveals that repeated exposure to deepfake videos (<https://www.ntu.edu.sg/news/detail/repeated-exposure-to-deepfakes-makes-you-more-likely-to-believe-it--study>) significantly increases the likelihood of believing their false claims. The research, conducted across several countries, shows that people are more likely to accept misleading information after encountering it multiple times on social media platforms.

The study involved 8,070 participants from Singapore, China, Indonesia, Malaysia, the Philippines, Thailand the United States, and Vietnam. One of the deepfakes shown to participants featured American media personality Kim Kardashian falsely accused of manipulating people online for financial gain. Those who had seen this viral deepfake previously were more likely to believe the claim when exposed to it again.

The same effect was observed when participants were shown deepfakes of other public figures. This finding supports the theory of the illusory truth effect, a psychological phenomenon where repetition increases the likelihood that individuals will accept information as true, regardless of its accuracy. When information is repeated, it becomes more familiar, making it easier for the brain to process and, ultimately, accept.

This effect was most pronounced among participants who primarily relied on social media for news, as they were more likely to encounter deepfakes through these platforms. As social media consumption rises, so does the risk of exposure to misleading information, making it more challenging for individuals to discern truth from fiction.

Interestingly, the study found that participants with higher cognitive abilities were not less susceptible to the illusory truth effect, contradicting previous research that suggested cognitive ability could serve as a defence against such psychological biases.

Assistant Professor Saifuddin Ahmed, who led the study at NTU's Wee Kim Wee School of Communication and Information, noted that these findings highlight the persistent influence of deepfakes across different cultural and political contexts.

“Our study shows that repeated exposure to the same deepfake increases the likelihood that individuals will believe it, regardless of the socio-political background,” said Assistant Professor Saifuddin. “As deepfakes become increasingly widespread, it is essential for governments, tech companies, and media outlets to collaborate on solutions to mitigate their harmful effects.”

The study suggests that policymakers could leverage the illusory truth effect in the fight against misinformation. By understanding how repetition can reinforce false beliefs, governments could develop educational campaigns designed to help individuals critically evaluate the information they encounter online.

Additionally, this psychological mechanism could be used to promote the dissemination of truthful information, such as during a health crisis, to subtly encourage positive behaviours in the public.

When comparing national differences in the perceived believability of deepfakes, the study found that participants in Singapore were the least likely to be deceived. This is thought to be due to higher levels of digital literacy and ongoing government initiatives to raise awareness of misinformation.

Despite this, Assistant Professor Saifuddin pointed out that many Singaporean participants still expressed uncertainty about the accuracy of the claims in the deepfakes, indicating a general wariness toward unfamiliar online information.

“As repeated misinformation exploits indecision, it is crucial to foster certainty-based rejection to build cognitive immunity,” said Assistant Professor Saifuddin. This would help individuals resist future persuasion and be better prepared to challenge misinformation when they encounter it.

Published in the *Journal of Broadcasting & Electronic Media*, the study used a common methodology in misinformation research. Participants were shown viral deepfakes and asked to rate their perceived truthfulness. The study also assessed participants' social media habits and cognitive abilities to understand how these factors influence susceptibility to deepfake misinformation.

The growing prevalence of deepfakes underscores the urgent need for effective solutions to combat their spread and protect the public from the dangers of misinformation.