

## Open science practices in gambling research publications (2016–2019): A scoping review

Open science (OS) practices are designed to enhance the quality, transparency, and replicability of scientific research.

Little is known about the use of OS practices in gambling research.

Reviewed **500 gambling-focused articles** published in peer-reviewed journals between 2016 and 2019 to **explore the use of OS practices.**

### Types of OS practices

**Pre-registration:** publicly documenting research plans, hypotheses, and analytic approaches prior to beginning the study



**Open data:** making the study data freely and publicly available



**Open access:** making the published study freely available online

**Open notebook:** making lab notes publicly available



**Open materials:** public archiving of researcher materials

**Open code:** making analytic code that was used in the study freely and publicly available

**Power analysis:** an assessment to ensure that a planned sample size will be large enough to test a hypothesis and detect effects

**Replication study:** repeating a study's analyses with a new sample to see if the results are similar

**Preprint:** making a study manuscript publicly available

Also explored the relationship between the use of OS practices and:

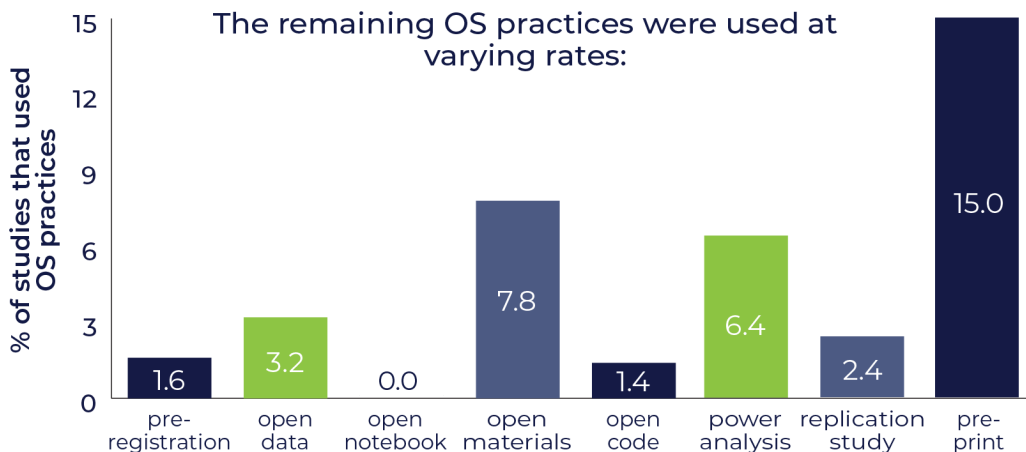


Type of funder (government, university, industry, or private)



Number of times each study was cited in other published works

**54.6%** of studies adopted at least one OS practice. The most commonly used OS practice was **open access, representing 35.2% of studies.**



Compared to government, private, and university funded studies, **industry funded studies used more OS practices** (i.e., open access, open materials, and power analysis).

Studies that used at least one OS practice were **cited more frequently**, making them more visible to a larger audience.

A relatively small percentage of studies used each OS practice. These results indicate a need for more gambling researchers to engage in OS practices.

**Academic institutions that teach students how to conduct research should integrate OS practices into their courses and training programs, creating a new era of researchers who use these practices as they progress through their careers.**

**Journals and funders should consider enacting policies to promote OS principles and practices, such as requiring a pre-registration and power analysis to receive funding.**