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Adoption of Publication Procedures to Improve Research Integrity by Alcohol & Other Drug Journals

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(Conflicts of Interest: None)

Replication Crisis

- Vast majority of published results are positive
- Many cannot be replicated
- Many produced through flexible data analysis & selective reporting
 - HARKing
 - P-hacking

Scope of the Problem

- Such problems found in clinical & preclinical research, psychology, epidemiology, political science & biology
- Journals in applied research areas & “soft” sciences are especially inclined to publish positive results
- Thus, relevant to addiction research

Proposed Solutions

- Conflict of Interest (Col) Declarations
- Write-up Studies using Guidelines
- Preregistration of Randomized Controlled Trials (RCTs)
- Preregistration of Other Study Designs
- Data & Methods Sharing
- Registered Reports

Current Study

- How many of these 6 publication procedures have been adopted by addiction journals?
- 38 high-impact “substance abuse” journals identified using Clarivate Analytics’ 2017 *Journal Citation Report* (JCR)
 - 1 review excluded from the 39 JCR addiction journals

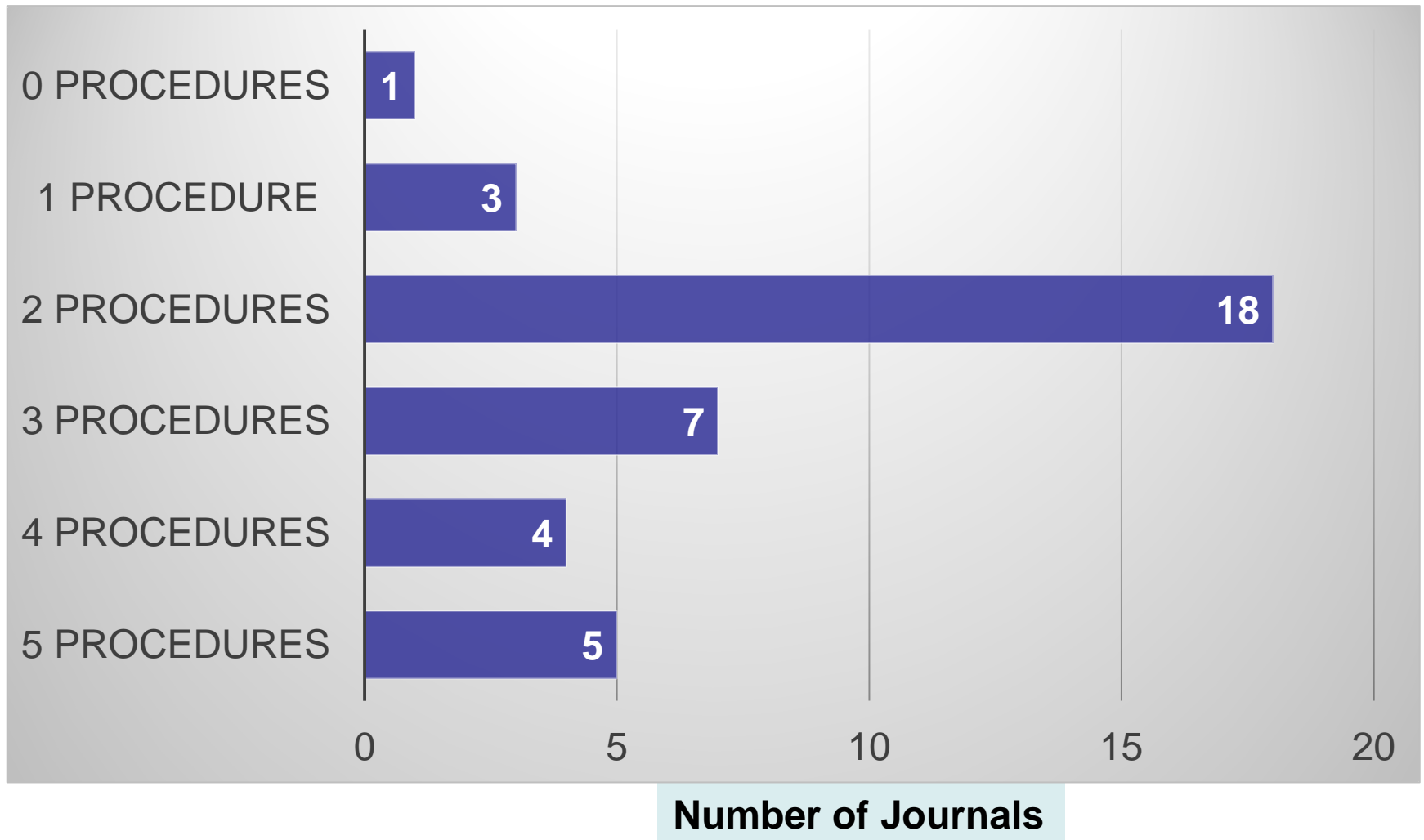
Data

- Journals
 - Publisher
 - 2017 JCR impact factor
 - Scimago h-index
- Publication Procedures
 - Online Journal Instructions for Authors
 - CONSORT webpage
 - Center for Open Science webpage for registered reports

Results (38 Journals)

- Mean Scimago h-index: 57.82 (range 12-167)
- Mean JCR impact factor: 2.245 (range 0.532-5.953)
- Correlation between the two metrics: 0.69
- Average number of publication procedures used: 2.66 (range 0-5)

Number of Journals & Number of Procedures (n=38)



Results: Use of Procedures

Publication Procedure	Number of Journals (of 38)
Col Declaration	37
Recommend Guidelines	13
RCT Preregistration	16
Other Preregistration	4 (3 systematic reviews; 1 hypotheses)
Data Sharing	28 (0 mandatory)
Registered Report	3

Discussion: Limitations of Most Used Procedures

- Guidelines (n=13)
 - Editors & reviewers must check for adherence
 - Difficult to tell from a manuscript if all guidelines have been followed
- Registration (n=16 & 4)
 - Application typically limited to RCTs
 - Registration entries can be vague
 - Reviewers must compare papers to entries

Discussion: Limitations of Most Used Procedures

- Col Declarations (n=37)
 - Limited Application to some financial Cols
- Data Sharing (n=28)
 - Voluntary sharing policies result in very little data sharing (tomorrow's presentation)
 - Depends on readers having the time & skills to re-analyze data
 - Useless without a pre-specified analysis plan

Discussion: Recommendations

- AOD journals should distinguish papers reporting *a priori* hypothesis testing from all other types of papers
- Registered reports & pre-registration of specific hypotheses allow this distinction
 - Only *Drug & Alcohol Dependence*, *Nicotine & Tobacco Research* and *Addiction Research & Theory* offer the former and only *Addiction* requires the latter

Discussion: Study Limitations

- Just 1 reviewer – possible human error
- Some publication procedures (e.g., registering RCTs) may not be relevant to all 38 journals
- Journals sometimes reference other guidelines that they may expect authors to consult in manuscript preparation

Further Details

- Gorman, D.M. (2019). Use of publication procedures to improve research integrity by addiction journals. *Addiction*, 114, 1478-1486.