



## ORIGINAL ARTICLE

# Brief alcohol intervention trials conducted by higher prestige authors and published in higher impact factor journals are cited more frequently

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Accepted 3 January 2016; Published online xxxx

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**Abstract**

**Objective:** To examine the relationships between study quality, author prestige, journal impact factors, and citation rates of trials and to examine whether journal impact factors mediated the relationships between study quality and author prestige on citation rates.

**Study Design and Setting:** We used bibliometric data from 128 controlled trials included in a recent meta-analysis on brief alcohol interventions for adolescents and young adults. We obtained the number of citations from ISI Web of Knowledge and Google Scholar; journal impact factors were obtained from ISI Web of Knowledge. Linear regression models were used to examine the direct and indirect effects of interest.

**Results:** The results indicated that studies were published in journals with higher impact factors when first authors had higher *h*-indices and studies were funded, but this was largely because those studies were of higher quality. Studies were cited more frequently when first authors had higher *h*-indices and studies were funded, even after adjusting for study quality proxies. The observed associations between study quality and author prestige on citation rates were also partly mediated through journal impact factors.

**Conclusion:** We conclude that studies conducted by more established authors and reported in more prestigious journal outlets are more likely to be cited by other scholars, even after controlling for various proxies of study quality. © 2016 Elsevier Inc. All rights reserved.

*Keywords:* Brief alcohol intervention; Citation bias; Meta-analysis; Publication bias; Reporting bias; Systematic review

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## 1. Introduction

Citation rates for journal articles are often used to measure scientific impact, such that widely cited publications presumably have greater influence on the diffusion of ideas than less frequently cited articles. Indeed, tenure and promotion committees often examine publication citation rates as proxies for a scholar's scientific productivity, contributions to the field, and quality of scholarship. The prevailing hypothesis is that methodologically sound publications will be cited more frequently than lower quality publications. This hypothesis is unsubstantiated, however, given that

citation rates have been linked to other factors unassociated with study quality, including the direction and statistical significance of effects [1–5]. Two other factors that may contribute to citation rates above and beyond study quality, however, are author prestige and journal impact factors.

Articles published by established scholars may be cited more frequently than those authored by less established scholars of similar quality, particularly if researchers regard established scholars' studies as exemplars given their presumed authority in a field [6]. Thus, part of the association between study quality and citation rates may be confounded with author prestige factors. Journal impact factors, which quantify the frequency that a typical study in a journal is cited in a given year [7], may also partly explain the association between study quality and citation rates. Established authors may also be more likely to publish in higher impact factor journals, and those articles published in higher impact factor journals tend to be cited more frequently [8]. Citation rates are therefore likely a function of both

Conflict of interest: None.

Funding: This work was partially supported by award number R01AA020286 from the National Institute on Alcohol Abuse and Alcoholism, and by an Institute of Education Sciences Postdoctoral Fellowship Training grant (R305B100016).

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**What is new?****Key findings**

- Articles reporting brief alcohol intervention trials for youth were published in journals with higher impact factors when first authors had higher *h*-indices, but this was largely because those studies were of higher quality.
- Articles were more often cited when first authors had higher *h*-indices, even after adjusting for a range of study quality proxies.
- The associations between author prestige and study citation rates were mediated by journal impact factor, even after adjusting for a range of study quality proxies.

**What this adds to what was known?**

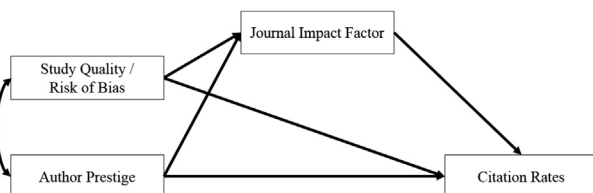
- This study adds to the empirical evidence on the topic of predictors of study citation rates and indicates that author prestige and journal impact factors are important predictors of citation rates above and beyond study quality.

**What is the implication and what should change now?**

- Bibliometric analyses predicting article citation rates should consider the role of author prestige and journal impact factors, in addition to study quality.

study quality and author prestige, the effects of which may both be mediated through journal impact factor (see Fig. 1 for a conceptual model).

A large and growing body of empirical research has examined the correlates of article citation rates and journal impact factors. Most prior research suggests that rigorously designed or high-quality-rated studies tend to be published in higher impact factor journals and/or be cited more frequently [9–12]; but see [13]. Impact factors are also highly correlated with citation rates [1,2,8,14–16]. We are unaware of any studies to date, however, that have explicitly examined how author prestige factors are



**Fig. 1.** Conceptual model of associations between study quality and risk of bias, author prestige, journal impact factor, and citation rates.

associated with citation rates above and beyond measures of methodological quality, nor any studies that have examined the potential mediating role of journal impact factors in these relationships.

In this study, we therefore addressed three questions: (1) how do author prestige characteristics correlate with journal impact factors, after adjusting for study quality proxies, (2) how do author prestige characteristics correlate with publication citation rates, after adjusting for study quality proxies, (3) do journal impact factors mediate the relationships between author prestige and study quality with citation rates? We examined these research questions using bibliometric data collected in a systematic review examining the effectiveness of brief alcohol interventions (BAIs) for youth. BAIs have gained prominence as a promising intervention approach for addressing heavy episodic alcohol consumption, which peaks in late adolescence and early adulthood [17,18].

**2. Methods***2.1. Reviewed studies*

We analyzed data from a recent systematic review and meta-analysis that synthesized findings from 185 studies to examine the effectiveness of BAIs for adolescents and young adults (see [19] for more details). The systematic review included experimental or controlled quasi-experimental trials that examined the effects of a BAI (i.e., no more than 5 hours of total contact time) relative to a comparison condition of no treatment, wait-list control, or treatment as usual. Eligible studies included adolescent (age 18 years and under) and young adult (ages 19–25 years, or collegiate undergraduate students) samples and were required to report at least one postintervention outcome related to alcohol consumption or an alcohol consumption-related problem (e.g., drunk driving). There were no geographic, language, or publication status restrictions on eligibility, but studies must have been conducted in 1980 or later. The present study restricted the sample to the 128 studies that were published in journal article format (this excluded 57 studies that were published solely in non-journal article format, including books, book chapters, theses, conference presentations, technical reports, etc.).

*2.2. Citation rates, journal impact factors, and study characteristics*

Citation counts were obtained from ISI Web of Knowledge (<https://webofknowledge.com/>) in August 2013. Because the total number of citations was correlated with publication year (such that older publications had more time to accrue subsequent citations), we used yearly citation rates for all analyses. Yearly citation rates were calculated by dividing the total citation count by the number of years since publication. Citation rates were also obtained

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