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# Correlation Between Number of Mendeley Readers and Citations in Dental Sciences

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Mendeley is a London-based company established in November 2007 by three German Ph.D. students. It was named in memoriam of biologist, Gregor Mendel, and chemist, Dmitri Mendeleyev. The company is best known for its reference manager which enjoys wide use by the research community. One of its interesting and notable features is Mendeley reader counts. This metric is defined as the number of unique Mendeley users that have added a specific article to a Mendeley personal library. Geographic location and discipline for Mendeley readers are also available. It is impossible to precisely determine who has bookmarked an article in Mendeley due to user privacy restrictions. However, the number of Mendeley readers for each article is available via https://www.mendeley.com/research-papers/.

Studies reported positive correlations between number of Mendeley readers and future citations.[1,2] Strong positive correlations have been reported in most scientific fields, averaging 0.671. However, the correlations in some scientific fields were reported as low as 0.255.[3]

In this investigation, we examined specifically the correlation between the number of Mendeley readers and citations in

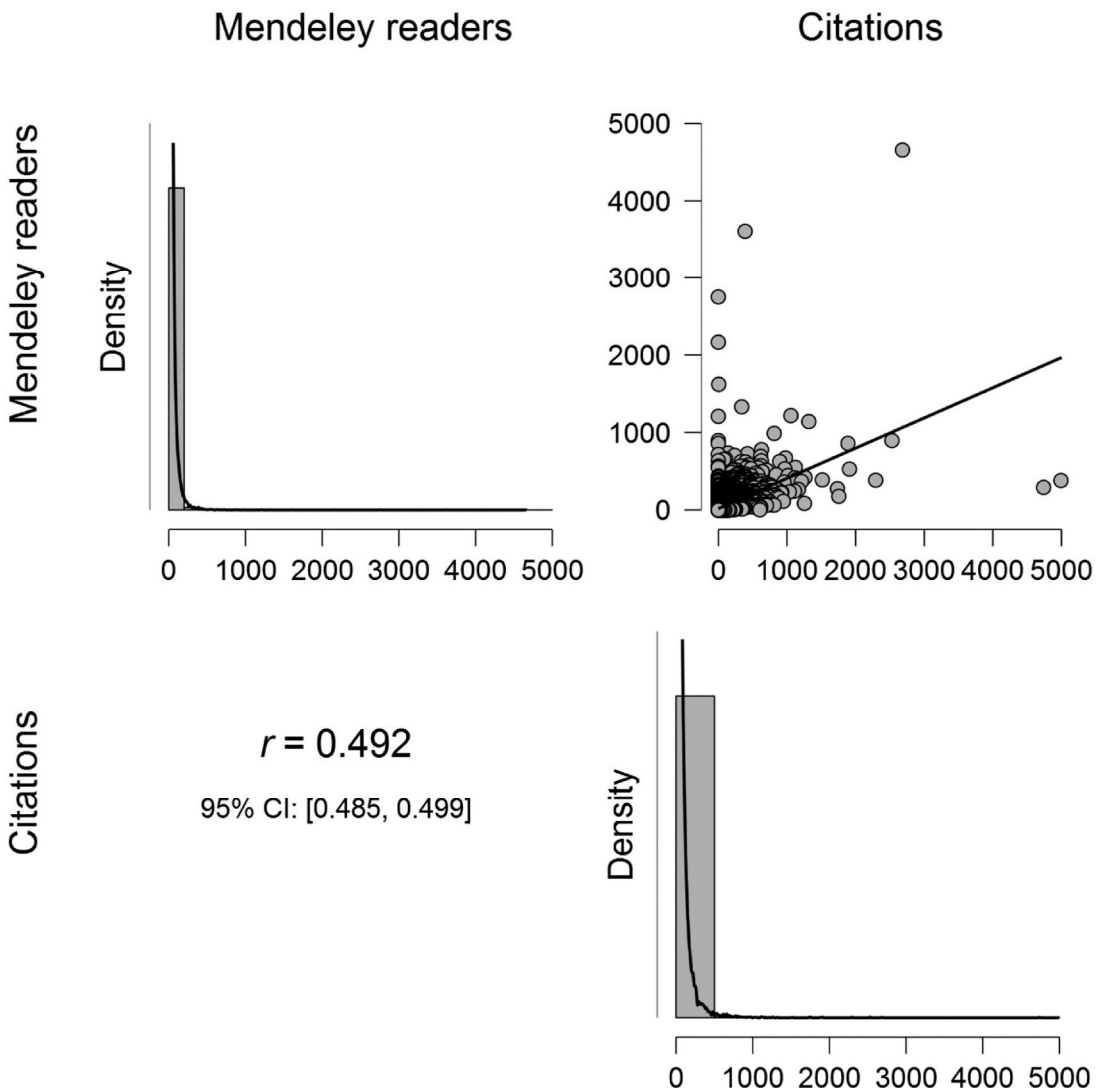


**Figure 1:** Correlation between number of Mendeley readers and citations among 45,675 dental articles. Histogram and density of each variable were also showed

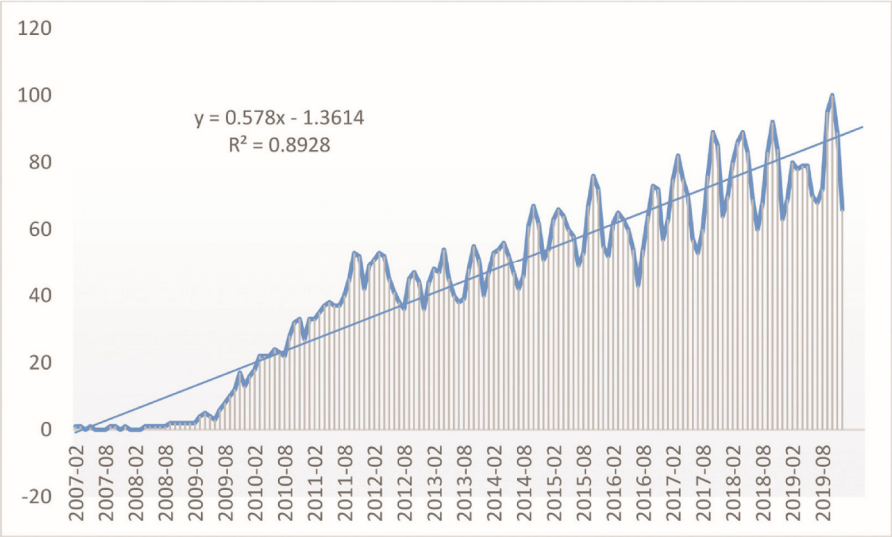


**Figure 2:** Google trends analysis for the search term "Mendeley". Vertical axis showed interest over time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. A score of 0 means there was not enough data for this term. Linear forecast trend-line analyses are also shown. Data are from http://trends.google.com (accessed 1 Jan 2020)

dental sciences. On December 30, 2019, the Altmetric database (Altmetric LLP, London, UK) was searched with the field of research code "1105 DENTISTRY". The number of Mendeley readers and citations from the "Dimensions" database of 45,675 dental articles were exported and analyzed using the Pearson correlation coefficient. Data analysis was carried out utilizing R 3.6.1 software (R Foundation for Statistical Computing, Vienna, Austria).

Moderate positive correlation was found between number of Mendeley readers and citations in dental sciences ($P<0.01$, Figure 1).

This large scale analysis incorporated dental articles from dental-specific and non-dental journals. For example, an article entitled "Dental caries" published in *The Lancet* included in this study had 1,218 Mendeley readers and 1,057 citations.[4]

Additionally, a Google trends search with the word "Mendeley" showed interest in this term has increased since 2007 [Figure 2]. With an increase in awareness and knowledge, Mendeley offers a useful and practical academic tool for the research community in dentistry and beyond. It is anticipated that the correlation between the number of Mendeley readers and citations will increase in the future.

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## Conflicts of interest

There are no conflicts of interest.

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