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Migraine Headache: Network Analysis Overview of Publications Study

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BACKGROUND

Researchers from different fields and various communities performed a lot of studies related to **Migraine headache** in more than 60 subject areas. Taking into account a large number of works, some approaches are needed for scientists who try to find out how significant a particular article is, to learn more about a field or topic and to determine how much impact a particular author has.

OBJECTIVES

We apply recently developed **models of network analysis** for publications in the fields of Migraine headache to reveal the links between research clusters, rank their importance and track changes of scientific groups attention to, for instance, previously unknown studies and developments.

METHODS

One of the applied approaches is **Citation analysis** which is the study of the impact and assumed quality of an article, an author, or an institution based on the number of times works and/or authors have been cited by others.

The presented models of network analysis of publications on various aspects of Migraine headache allow to reveal the links between research clusters, rank its importance and track changes.

Recently developed network analysis algorithms including new centrality indices have been applied for publications databases on different aspects of Migraine. Articles with keywords "Migraine" were analyzed. Data were taken from Web of Science (WOS) publications database and consist of more than 40,000 articles dated from 1980 to 2017.

RESULTS

~40 thousand articles in **WOS** related to **Migraine headache**

2499 articles in 2017

Table 1: Web of Science Key Categories of Migraine headache related articles

Web of Science Key Categories of Migraine headache related articles	Number (in thousand)
Clinical Neurology	23.9
Neurosciences	13.4
Medicine General Internal	3.7
Pharmacology & Pharmacy	2.7
Psychiatry	2.0
Pediatrics	1.2
Anesthesiology	0.87
Surgery	0.81
Medicine Research Experimental	0.68
Public Environmental Occupational Health	0.56

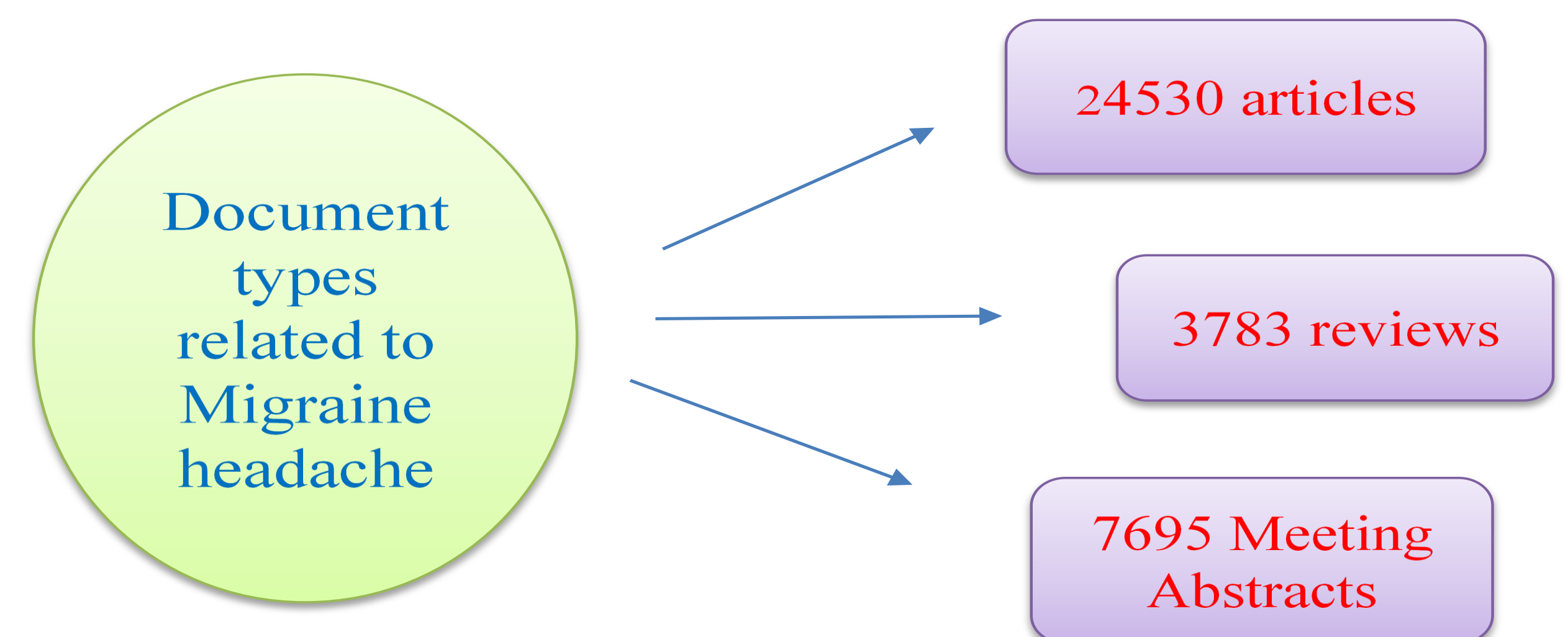


Figure 1 is a Bar Chart showing **Top TEN countries** in Migraine headache related articles.

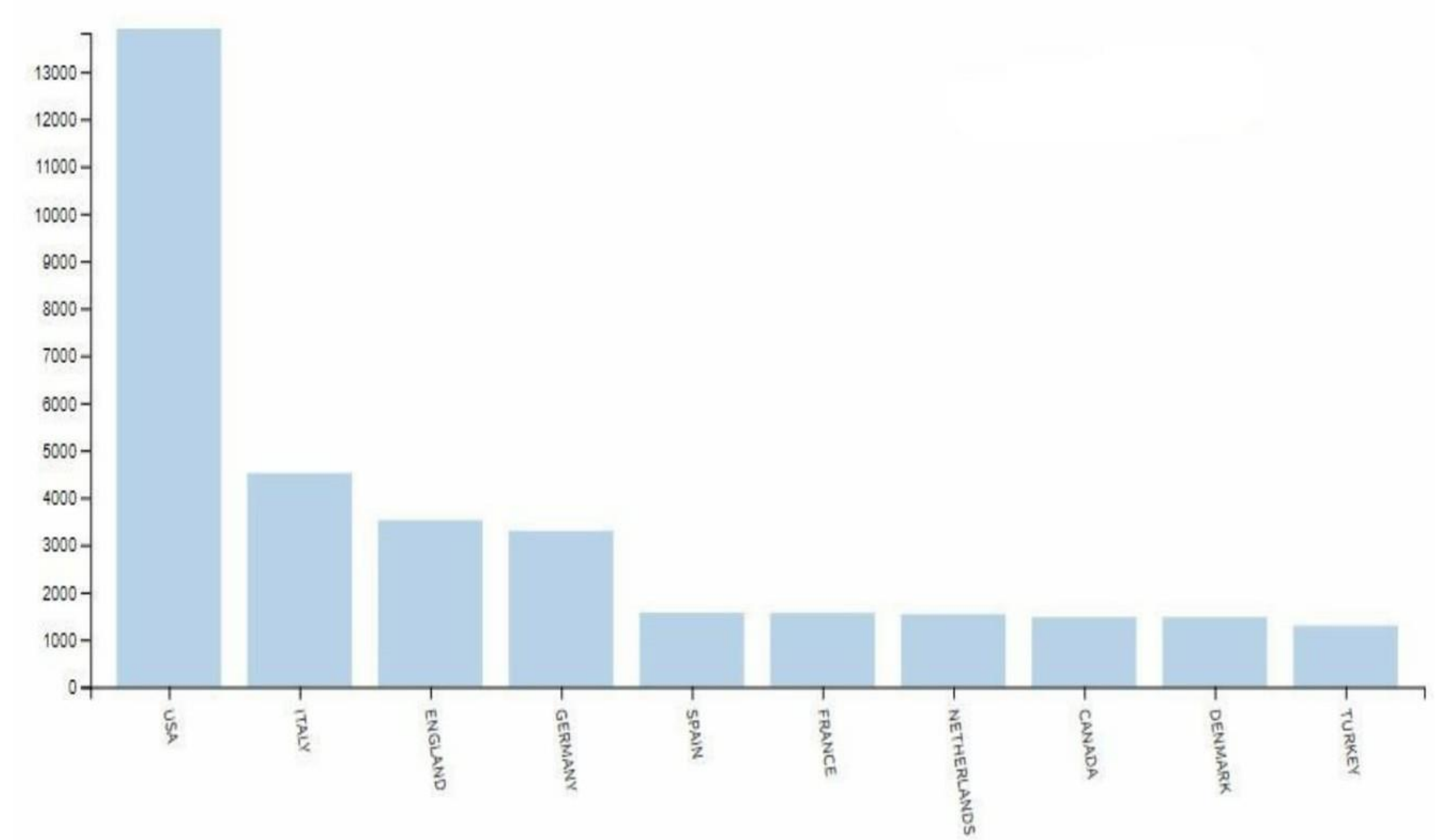
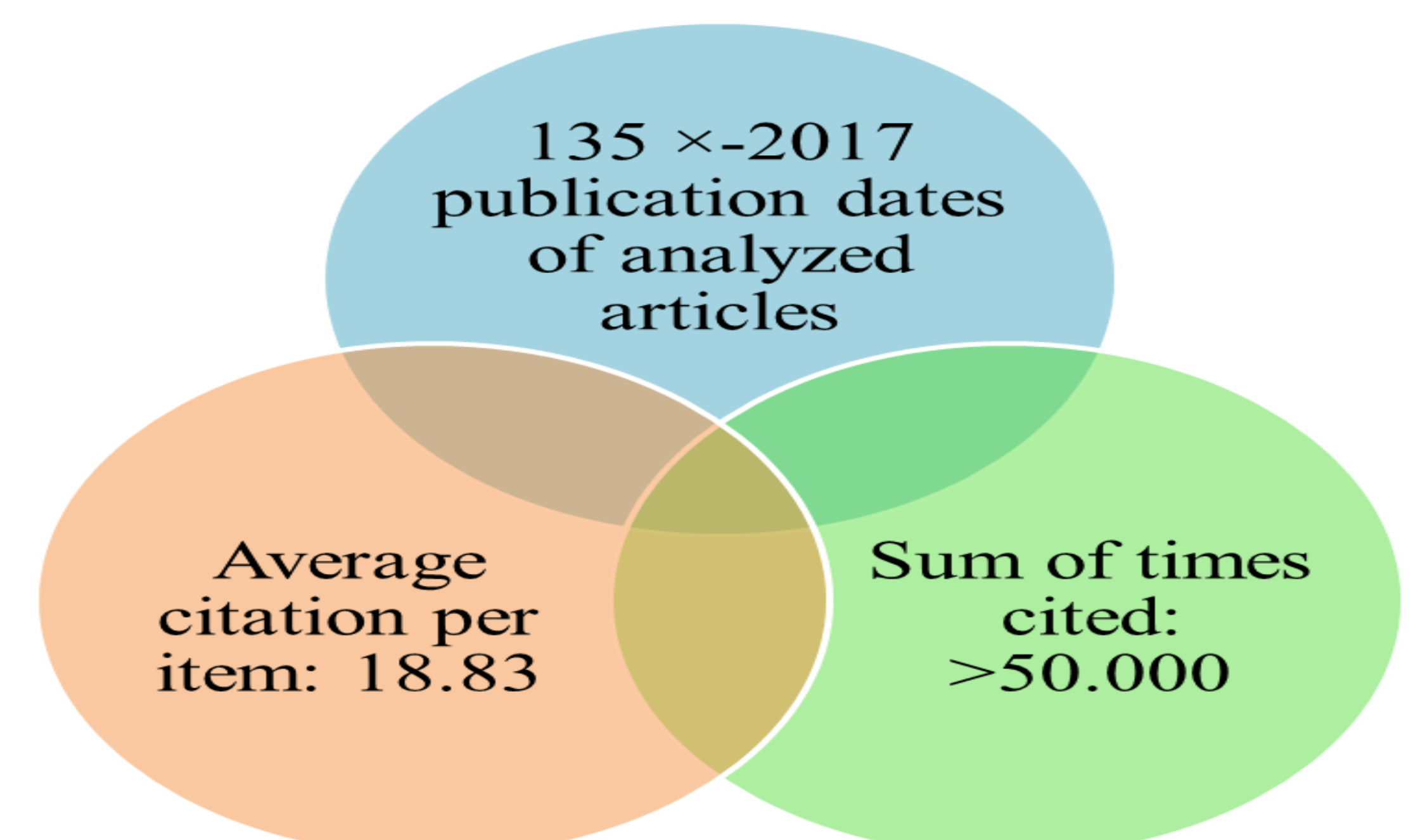


Figure 1: Number of Migraine headache related articles by Region/Country



TOP-3 most Cited Papers

- 1** MOSKOWITZ, 1992: Neurogenic Versus Vascular Mechanisms of Sumatriptan And Ergot Alkaloids in Migraine
- 2** Tfelt-Hansen et al., 2000: Triptans in migraine - A comparative review of pharmacology, pharmacokinetics and efficacy
- 3** OLESEN et al., 1994: Nitric-Oxide Is A Key Molecule in Migraine and Other Vascular Headaches

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