

Academic Odyssey of a Clandestine Killer: Exploring Patterns and Trends in COVID-19 and Corona-Virus Related Researches

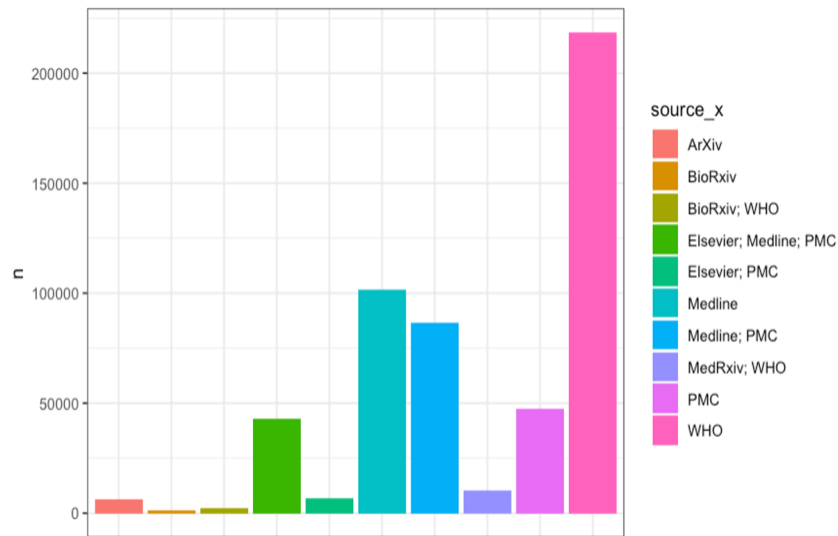
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Introduction

Our dataset contains about 539,000 COVID-19 and coronavirus-related research articles over spanning two decades. We explored this corpus of data to understand how studies on coronavirus evolved over the years.

Meta Data

- Publication Title
- Abstract
- Authors,
- Day/Time/Year of publication
- License type, journal



RESEARCH QUESTION

In what ways did the focus of coronavirus and related researches evolve in the years before and after the COVID-19 pandemic?



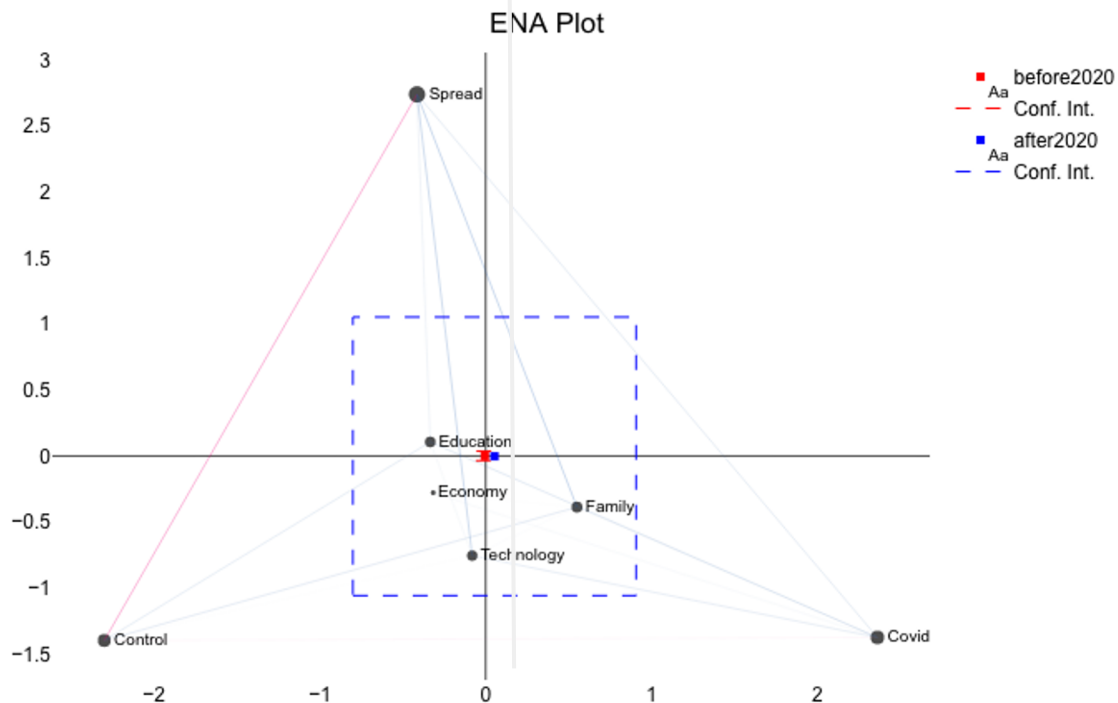
Methods

- ▶ CORD-19 Data
- ▶ 710 articles were randomly sampled from each year, 2000 - 2021
- ▶ 15659 Studies
- ▶ Data analysis:
 - ▶ Inductive coding, and validation using NCoder
 - ▶ ENA

Codes		
<p>COVID (K = 0.95 , P =) <i>Public health understanding of Coronaviruses</i></p>	<p>Spread (K = 0.79 , P =) <i>The spread of coronavirus infection and resulting death.</i></p>	<p>Control (K = 1 , P =) <i>Efforts aimed at controlling the spread of coronavirus</i></p>
<p>Economy (K = 1.00 , P = .00) <i>The financial implications of coronavirus on individual and global businesses.</i></p>	<p>Technology (K = .90 , P = .06) <i>The use of innovative technology to study and adapt to coronavirus</i></p>	<p>Family (kappa = 0.92 , rho =) <i>Social and health implication of coronavirus on families</i></p>
<p>Education (kappa = 0.96 , rho = 0.01) <i>Impact of coronavirus on learning</i></p>		

ENAs: Two Groupings

Before 2020, studies on coronavirus made stronger connection between **control and spread of the virus**. **Post 2020** studies however made stronger connections between **Spread and 3 other codes- Technology, Family and Covid**



ENAs: Two Groupings

Before 2020

*In early life, viral infections can either increase or, remarkably, decrease the **risk of subsequent asthma.***

*The decision to admit patients from the emergency department is a major one because of its **impact on patients** and the hospital.*

After 2020

*The **risk** of undetected SARS-CoV-2 infection **appears to be low in terms of costs and personnel...***

*The essay reflects on the **impact of the economic crisis** caused by the Covid-19 on the European Union*

Conclusions & Discussion

- ▶ The observed changes appears to be a response of the research community to help people (family, schools, and businesses) manage and cope with the impact of COVID-19.
- ▶ Papers published on coronavirus prior to 2020 were primarily health related while those published after covered a broader aspect of societal life.

Limitations & Plans for Further Studies

- ▶ There may be more codes in the data, that we fail to account for due to the short available time.
- ▶ There is a considerable large difference in the samples of the two groups that were compared. This may have affected the results of this study.

For future studies, we plan to investigate whether studies conducted after COVID-19 provide models for dealing with the impact of a pandemic

Thanks



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