

Scientific Production And Dissemination Forecast Related With Covid-19

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Abstract

The new coronavirus SARS-CoV-2 causes the known disease as COVID -19 extended around the world, increasing the infected and deceased cases. It was declared pandemic by OMS in March of this year. It is reason to activate the scientific community in the production and dissemination of scientific articles. This paper analyzes and predicts scientific publications related with COVID 19, monthly and for country, proceeded and registered daily by CTS Observatory based on PubMed. USA highlights as the main country who publishes with 7,974 (27.73 %) results, followed by China with 4,202 (14.61 %). In Iberoamerican level, Spain and Brazil highlight with 4.26% y 2.37%, respectively. An increase of publications related with COVID-19 of 2,236 monthly publications is predicted in the mentioned database.

Keywords: COVID-19, scientific publications, scientific production

1. Introduction

In Wuhan, China, in early December 2019, the first cases of infected persons with the new coronavirus: COVID-19 were registered [1]. On December 30th, the World Health Organization (OMS) in China is reported by local authorities about some cases of pneumonia from unknown causes [2] [3]. On March 11th, 2020 was declared by OMS as pandemic for alarming levels of spread, severity and inaction [4].

As an example, in América (Table 1), according the data supplied by PAHO [5], on July 6th of this year, 5,915,551 cases and 266,736 deaths caused by this virus have been recorded. United State of America and Brazil distinguish with 2,877,238 and 1,603,055 registered cases, respectively, what represents the 48.63% and 27.09 % of the cases in

America. According to the Table 2, The country most affected is United States of America, with almost three millions of infected and more than 131,000 deaths, followed by Brazil, with almost 1.7 millions of infected and 67,000 deaths; then India, Russia, Peru, Chile, Spain, United Kingdom and Mexico. [6] [7] [8].

Table 1. Cases and deaths registered in America by COVID-19 on July 6th, 2020 [5]

	Total Cases	Total Deaths
North America	3.239.622	168.966
Central America	100.575	2.660
South America	2.511.513	93.794
Caribbean and Atlantic Ocean Islans	63.841	1.316
TOTAL	5.915.551	266.736

Table 2. Countries with more cases and deaths by COVID-19 on July 7th, de 2020 [6] [7] [8]

	Cases	Deaths
USA	3.097.417	131.480
Brazil	1.674.655	66.741
India	744.330	20.642
Russia	700.792	10.650
Peru	309.278	10.952
Chile	301.019	6.434
Spain	299.210	28.392
United Kingdom	286.008	44.476
Mexico	268.008	32.014
Iran	245.688	12.084
Italy	241.956	34.899

Due to novelty and spread of the virus, the global scientific community has given the task to produce and publish articles of various approaches to answer the questions about the cases and the deaths. This paper analyzes and predicts scientific publications related with COVID 19, monthly and for country, proceeded and registered daily by CTS Observatory [9] based on PubMed [10].

Nomenclature

OMS	World Health Organization
CTS	Ibero-American Observatory of Science, Technology and Society
SIR Iber	Ranking SCImago of the Ibero-American universities

2. Scientific publications about COVID-19

On January 17th, 2020; the first two (02) documents about COVID-19 appear published in the largest database of scientific information of the world about health (PubMed) [10]. From that date, the CTS Observatory processes and registers daily the scientific publications related with COVID 19 [9] based on PubMed (Fig. 1). Until June 28th have been registered 26,682 publications. May and June are distinguished with the greater amount of publications, with 35.2% and 35.5%, respectively.

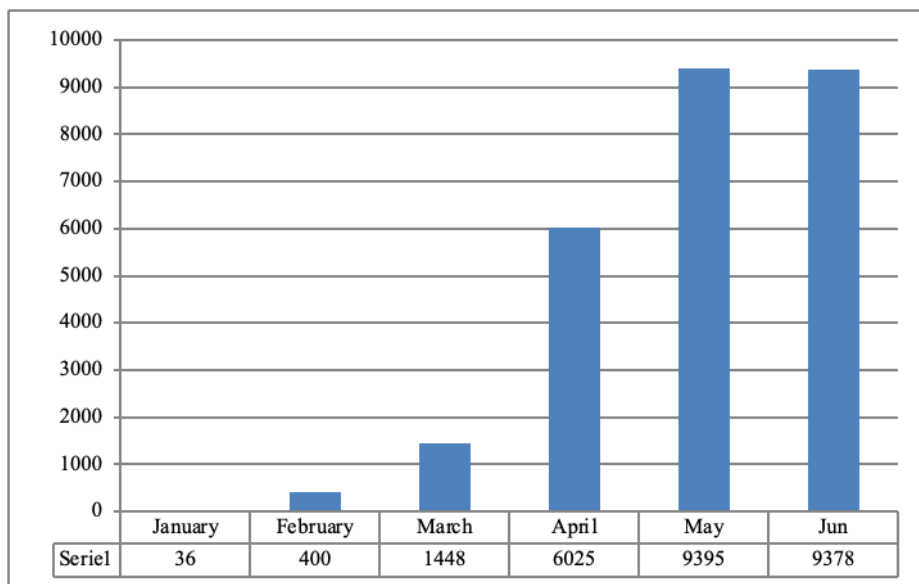


Fig. 1. Scientific publications per month related with COVID 19 according the data proceeded and registered daily by OCTS based on PubMed [9]

On June 6th, the number of publications increases to 28,752 [9]. Fig. 2 shows the amount of publications of ten (10) countries: United States, China, Italy, United Kingdom and Nameless. India, France, Canada, Spain and Germany, accumulate 27,911 publications, what represents 97.07% of total publications. United States highlights as the main country who publishes with 7,974 (27.73 %) results, followed by China with 4,202 (14.61 %). It is worth noting that in fifth place is a country with unedited name by [9] but accumulates 2,753 publications (9.57%) and, for this paper has been written as nameless, however, at the time of the review [11], it appears that the data refers to Japan. It is an error on the database [9].

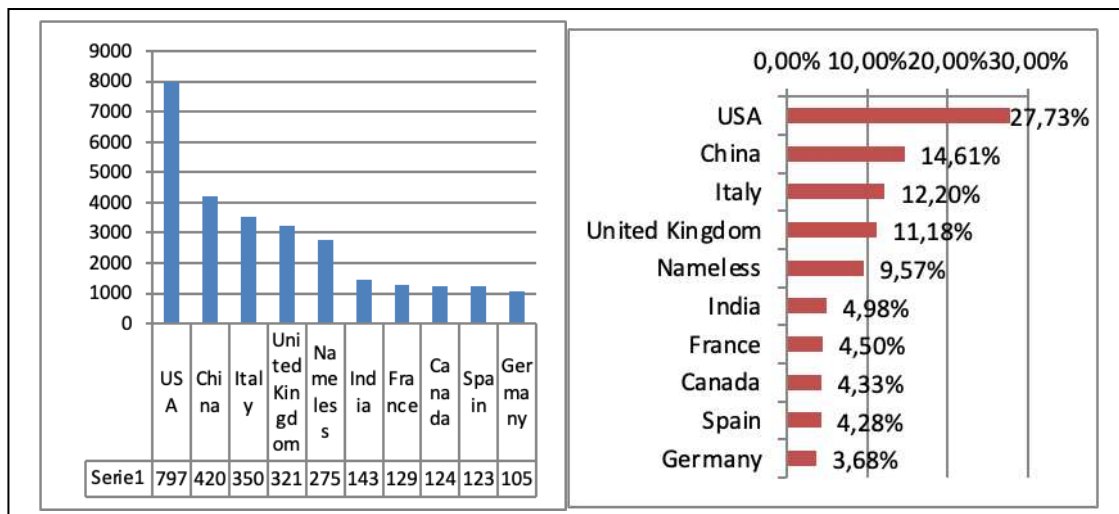


Fig. 2. Scientific publications for country related with COVID 19 according to the data proceeded and registered daily by OCTS based on PubMed [9]

On the other side, according to the 2020 SIR Iber review [12] [13], Brazil, Spain, Portugal, Mexico, Chile, Argentina and Colombia reappear as the countries with the highest capacity for production and publication of scientific papers in Ibero-american region achieves more than 60.000 published papers in 2014 - 2018 and, therefore, constitute the group 1 for this report analysis. In this respect, publications of these countries are considered to this paper to contrast scientific publications indicators related with COVID 19 (Fig. 3) [9]: in January this year, only Brazil realized a publication, Mexico does it after March. By June this year, Spain registers 480 publications, followed by Brazil with 272 publications and emphasizes as the latinoamerican country with the greater amount. Spain accumulates, until June, 4.26% of the global publications, followed by Brazil with 2.37%, then Portugal and Mexico, with near values, 0.73% and 0.71%, respectively. Colombia and Argentina also with similar values: 0.48% and 0.44% and, in the last place, Chile with 0.30%. These seven (07) ibero-american countries accumulate 2,479 (9.29%) of the 26,682 global publications related with COVID-19, until June 28th, 2020, according to the registered information by CTS Observatory [9] based on PubMed.

3. Scientific publications forecast related with COVID 19

Since January 17th, 2020, the global scientific community has answered in the treatment of the pandemic from differences perspectives. First of all, in chinese intitutes are concentrated, but then scientific from United States, China, Italy, United Kingdom and Hong Kong are added, to appoint the most numerous. According to [11] a ripple effect is stressed: COVID-19 promoted the need to streamline the science answers in the world, also, claims that the investigation about Covid-19 expands at virus speed. USA and China will continue to lead the number of publications and, at ibero-american level, Spain and Brazil.

Papers encompass different topics since identification of the new pathogen, epidemiological aspect, prevention, control, treatment, geographic extent, the mode of spread, challenges to health systems, personal and collective behaviour, costs of medical treatment, influence in the socio-economic indicators, which are developed [9] [10] and,

according to Fig.4, an increase in the number of publications related with COVID-19 of 2,236 monthly publications is expected [14] [15].

Fig. 3. Scientific publications per ibero-american country from group 1 of the 2020 SIR Iber review [12], related with COVID-19 according to the data proceeded and registered daily by CTS Observatory based on PubMed [9]

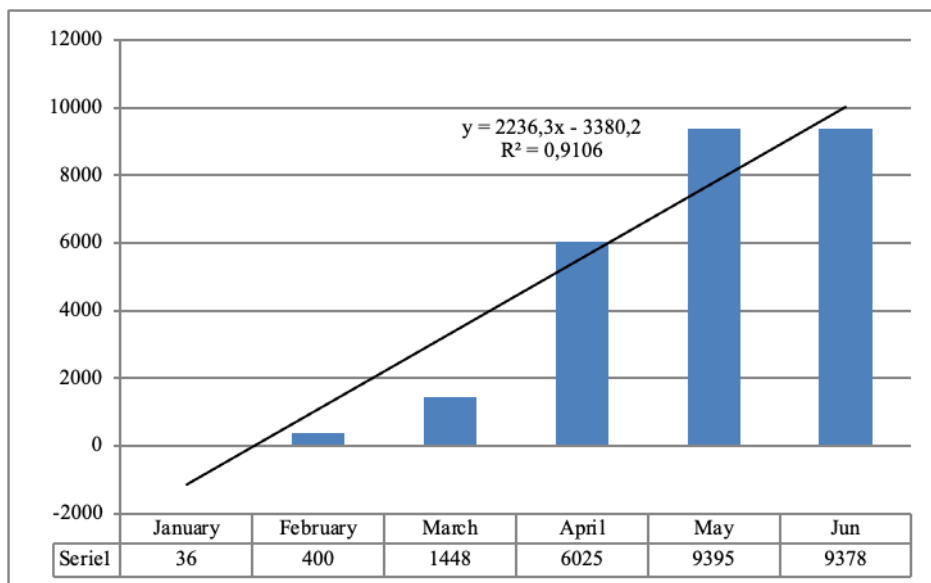


Fig. 4. Scientific publications forecast per month related with COVID-19 according to the data proceeded and registered daily by CTS Observatory based on PubMed [9] [14] [15]

4. Conclusions

The COVID-19 pandemic produced by the new coronavirus SARS-CoV-2, continues to spread around the world causing the infection and death of people, resulting the scientific community activation in the production and publication of papers related with the topic, which respond to the identification of the new pathogen, epidemiological aspect, prevention, control, treatment, geographic extent, the mode of spread, challenges to health systems, personal and collective behaviour, , costs of medical treatment, influence in the socio-economic indicators, to name just a few. According to the data proceeded by CTS Observatory based on PubMed, United States emphasizes as the main country who publishes with 7,974 (27.73 %) results, followed by China with 4,202 (14.61 %). In Ibero-american level, Spain and Brazil highlight with 4.26% y 2.37%, respectively. An increase of publications related with COVID-19 of 2,236 monthly publications is predicted. USA and China will continue to lead in the production and publication of scientific papers and, in ibero-american level, Spain and Brazil.

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