

A Google Trends Analysis of Orthopedic Surgery Interests during the COVID-19 Pandemic

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As it has spread worldwide, the Coronavirus disease 2019 (COVID-19) pandemic has affected all human societies. Several unnecessary therapeutic interventions and elective surgeries were canceled or restricted. Increasing the epidemic of COVID-19 caused the health care system to face many patients with respiratory problems, resulting in restrictions on the admission and treatment of most medical disciplines (1).

The respiratory disease epidemic caused by COVID-19 is not directly related to orthopedic diseases; yet, since most hospitals and the health system were involved, it disrupted the treatment process of orthopedic diseases (1, 2). There was also an emergency to maintain the intensive care unit (ICU) capacity, and the possibility of orthopedic surgery was eliminated in the elderly and those with underlying diseases.

Google trends analysis is a tool developed by the Google search engine that can examine the search results of people and their interest in various topics, through which the interest of people can be measured in different parts of the world and at specific times. In this analysis system, scores are given for people’s searches from 0 to 100, and a higher score indicates greater popularity at the time of measurement. Therefore, the four most terms used in google search related to orthopedic interventions,

including joint replacement, bone fracture, knee replacement, and arthroplasty, were examined. The period was selected from the beginning of 2019 to the end of 2020, before and after the outbreak of the COVID-19 pandemic.

According to the data from Google Trend, which can be seen in figure 1, with the beginning of the COVID-19 epidemic in the first two months of 2020, we gradually had a significant decrease in the average search for topics related to orthopedic diseases. In figure 2, the comparison is based on different search areas. The overall average of searches for joint replacement was 26%; knee replacement 78%, bone fracture 26%, and arthroplasty 11%, which decreased to 11%, 41%, 20%, and 7% after the outbreak of COVID-19 in April and March, respectively. The largest decrease was related to arthroplasty-related terms, and there was no difference in trauma.

One of the main reasons for the significant reduction in orthopedic diseases has been severe restrictions and quarantine, and the stay-at-home offer has played a key role for individuals (3).

Given the decrease in the number of patients with acute respiratory diseases and the empowerment of health systems by the end of 2020, there has been an increase in people’s interest. Finally, there was no difference in the last months of 2020 compared to 2019.

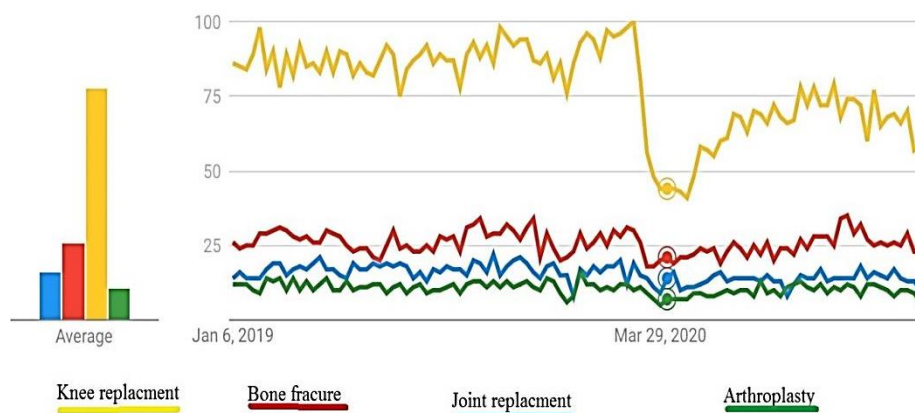


Figure 1. Comparison of search terms and topics related to orthopedics in google search engine during 2019-2020



● Joint replacement ● Bone fracture ● Knee replacement ● Arthroplasty



Figure 2. Comparison of search terms and topics related to orthopedics in google search engine during 2019-2020 by region

In a study by Dhanda et al., in the field of facial plastic surgery performed during the COVID-19 epidemic, similar findings have shown a decrease in people's interest in the first two months of 2020 (3). Finally, the increase in searches for plastic surgery has been similar to orthopedic diseases. The COVID-19 pandemic does not appear to affect people's interest in orthopedic-related diseases, and has returned to normal with the reduction of communication restrictions.

Conflict of Interest

The authors declare no conflict of interest in this study.

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