

Websites and mobile applications as communication strategies during the Covid-19 pandemic in Brazil

Sites e aplicativos móveis como estratégias de comunicação durante a pandemia de Covid-19 no Brasil

Sitios web y aplicaciones móviles como estrategias de comunicación durante la pandemia de Covid-19 en Brasil

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REVISA

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RESUMO

Objetivo: identificar as métricas disponíveis para as ferramentas digitais que propagam a informação sobre a covid-19 na população brasileira. **Metodologia:** É um estudo documental, realizado em diferentes plataformas a fim de encontrar sites e aplicativos móveis responsáveis em passar as informações sobre a covid-19 e o estado de pandemia no Brasil. Posteriormente, foram estabelecidas métricas, utilizando a ferramenta SimilarWeb, que auxiliassem a determinar a frequência de uso e aceitação dessas ferramentas pela população. **Resultados:** No que diz respeito aos sites brasileiros, em primeiro lugar, com o maior número de acessos, encontra-se a página do Ministério da Saúde, do Governo Federal, com uma média de 68 milhões de acessos por mês. O SimilarWeb ainda afirma que essa é a 3ª página mais procurada no Brasil. No que diz respeito aos aplicativos, os baixados na Play Store são: CoronavírusSUS e o aplicativo Dados do Bem. Os dispositivos também auxiliam para que as informações sejam passadas rapidamente, utilizando linguagem acessível e elementos atrativos. **Conclusão:** Nesse contexto, as ferramentas digitais tornaram-se o aliado ideal para a aquisição de novas informações, e assim promover a prevenção, o autocuidado, como a autotriagem e autoavaliação, e o controle do vírus, trazendo diversos benefícios a saúde.

Descritores: Covid-19; Comunicação; Comunicação em Saúde; Tecnologia Digital.

ABSTRACT

Objective: to identify the metrics available for digital tools that disseminate information about covid-19 in the Brazilian population. **Methodology:** A survey was carried out on different platforms in order to find websites and mobile applications responsible for passing on information about covid-19 and the state of the pandemic in Brazil. Subsequently, metrics were established using the SimilarWeb tool, which would help determine the frequency of use and acceptance of these tools by the population. **Results:** With regard to Brazilian websites, in first place, with the highest number of accesses, is the page of the Ministry of Health, of the Federal Government, with an average of 68 million accesses per month. SimilarWeb also claims that this is the 3rd most searched page in Brazil. With regard to apps, the ones downloaded from the Play Store are: CoronavírusSUS and the Data do Good app. The devices also help to transmit information quickly, using accessible language and attractive elements. **Conclusion:** In this context, digital tools have become the ideal ally for acquiring new information, and thus promoting prevention, self-care, such as self-screening and self-assessment, and virus control, bringing many health benefits.

Descriptors: Covid-19; Communication; Health Communication; Digital Technology.

RESUMEN

Objetivo: identificar las métricas disponibles para herramientas digitales que difunden información sobre covid-19 en la población brasileña. **Metodología:** se realizó una encuesta en diferentes plataformas para encontrar sitios web y aplicaciones móviles responsables de transmitir información sobre covid-19 y el estado de la pandemia en Brasil. Posteriormente se establecieron métricas utilizando la herramienta SimilarWeb, las cuales ayudarían a determinar la frecuencia de uso y aceptación de estas herramientas por parte de la población. **Resultados:** Con respecto a los sitios web brasileños, en primer lugar, con el mayor número de accesos, está la página del Ministerio de Salud, del Gobierno Federal, con un promedio de 68 millones de accesos por mes. SimilarWeb también afirma que esta es la tercera página más buscada en Brasil. En cuanto a las aplicaciones, las que se descargan de la Play Store son: CoronavírusSUS y la aplicación Data do Good. Los dispositivos también ayudan a transmitir información de forma rápida, utilizando un lenguaje accesible y elementos atractivos. **Conclusión:** En este contexto, las herramientas digitales se han convertido en el aliado ideal para adquirir nueva información y así promover la prevención, el autocuidado, como la autoevaluación y la autoevaluación, y el control de virus, trayendo muchos beneficios para la salud.

Descritores: Covid-19; Comunicación; Comunicación en Salud; Tecnología Digital.

ORIGINAL

Introduction

The World Health Organization in March 2020 declared the state of pandemic due to the rapid spread of the infectious disease caused by SARS-CoV 2, called covid-19, which has hit every country in the world. This pathology triggered an accelerated process of illness and mortality of the population, which caused in Brazil more than 35.5 million confirmed cases and 690 thousand deaths.¹

Covid-19 is a viral pathology that causes an acute respiratory infection, in which the main symptoms are: fever, cough and dyspnea. The virus can be transmitted by droplets, contact, or aerosol. Therefore, avoiding direct contact with the infected person has emerged as the main strategy to prevent the spread of the virus.²

Given the above, some health authorities have determined restrictive measures as strategies to mitigate the accelerated spread of the virus. In the meantime, isolation and social distancing stand out as the main strategies adopted to contain the rampant spread of this virus. In Brazil, this recommendation came from state and municipal governments through the closure of businesses, schools, colleges, cities, borders and the confinement of people in their homes, and effectively contributed to the decrease of the exponential growth in the number of new cases of the disease.^{3,4}

Considering this context of the global health crisis, in 2020 there was a vertiginous evolution of digital technology, which was reinventing and implementing itself, adapting to the new normal. The state of the pandemic has thus intensified the use of digital technologies, as corroborated by the survey on the use of Information and Communication Technologies in Brazilian households (TIC Domicílios), conducted in 2020, which confirms the increase from 71% to 89% of households with internet access in Brazil.⁵

The use of digital tools in health has been expanding exponentially in times of pandemic because it enables the rapid transmission and processing of information, communication, almost instantly regardless of the geographic location of that population. However, on the other hand, the so-called Fakes News, information without veracity, also spread rapidly. Therefore, to combat misinformation, metrics were created to evaluate the scope and purpose of the site or application used.⁶

For the sites available on the internet, there is an analysis tool called SimilarWeb, which evaluates traffic metrics such as number of daily, weekly and monthly visits, bounce rate, average duration of visit per page, origin of traffic, region from where the page was accessed, segmentation by country or geography, page by visit, engagement, global ranking, country and category.⁷

With regard to applications (APP), it is more difficult to evaluate the content available, the effectiveness and quality of information, especially in the speed of creation and availability of new APP's. One of the ways to evaluate the acceptance of the same, is to analyze the reviews made by users, in which there is a score based on numbers of stars, ranging from one to five, in ascending order of satisfaction and observe the number of downloads that concerns the acceptability of that APP on the platform.

In this sense, this work aims to identify the metrics available for digital tools that spread information about covid-19 in the Brazilian population.

Method

It is a documentary study that consists of the evaluation of materials that have not yet undergone any analysis work, and may direct to interpretations or complementary information, so this type of research involves data obtained strictly from documents. Etymologically speaking the word "document" refers to vestiges of the past, such as written texts, but also includes materials of an iconographic and cinematographic nature, or any other type of recorded testimony and everyday objects. In this sense, it is appropriate to highlight that in documentary research the researcher must understand the documents as "means of communication", since they were prepared with the purpose of disseminating information.⁸

A search was conducted on different platforms available on the internet in order to find websites and mobile applications responsible for passing on information about covid-19, the state of the pandemic in Brazil. As inclusion criteria, the following were established: technologies that addressed the theme of covid-19, that were produced in Brazil, that portrayed the reality of this country and were available in Portuguese. Subsequently, metrics were established to help determine the frequency of use and acceptance of these tools by the population.

With regard to the sites, the search was conducted on Google and Yahoo Searches, between December 10 and 13, 2022, using the following terms: "covid-19 Brazil", "covid-19 Brazil today" and "coronavirus Brazil". As the content available on the internet is very dynamic and changes frequently, a search deadline (December 13, 2022) has been set. The SimilarWeb tool was also used to analyze metrics such as: total visits, average duration of visits and bounce rate. These usage indicators correspond to the results obtained during a 6-month interval (from July 2022 to December 2022).

For mobile applications, the search terms used on the Google Play platform were: "APP COVID", "SARS-COV BRASIL", "COVID-19 BRASIL" and "coronavirus Brasil". Only mobile apps made in Brazil from 2020 onwards were selected. In the analysis of mobile applications, metrics such as number of downloads and star rating were used. It was determined to use the Google Play platform metrics because it is freely accessible and does not depend on a cost.

Results and Discussion

With regard to the most accessed Brazilian sites in the search engine of Google and Yahoo Searches, in the first place, with the highest number of hits, is the page of the Ministry of Health (<https://www.gov.br/saude/pt-br>), of the Federal Government, with an average of 68 million hits per month, an average visit rate of 2 and a half minutes and a rejection rate of 64.96%. SimilarWeb also states that this is the 3rd page related to the Government most sought after in Brazil. This website provides information on the pathology, updated registration of covid-19 cases and on the vaccination process.

Then comes the Coronavirus Brazil Panel (<https://covid.saude.gov.br/>), of DATASUS, which was developed to be the official communication vehicle on the epidemiological situation of COVID-19 in Brazil. The data are updated from official information on the number of confirmed cases and deaths provided by the 27 Federative Units of the country through the State Health Secretariats.

According to SimilarWeb, this page had a total of 564,000 hits in the month of November 2022, with an average visit duration of 9 seconds and a bounce rate of 64.96%. It is a page that offers punctual and quick information about the epidemiological state of the country, which justifies the quick visits to the site.

Another site with a significant number of hits is that of Fiocruz (<https://www.canalsaude.fiocruz.br>) with an average of 60 thousand hits per month, with an average visit duration rate of 22 seconds and rejection rate of 77.05%. The site brings information about the pathology, about the vaccination process, as well as scientific research related to health.

It is then noticed that the most sought after sites in Brazil to obtain information about covid-19 are the official ones of the federal government. These pages have epidemiological information, as well as guidance on the clinical manifestations of the disease and indications on the attitudes to be taken for testing and treatment. But it is worth mentioning that the bounce rate, which is the percentage of abandonment of the visitor when the user enters the site is still high.

It is worth mentioning that the Ministry of Health still has an application and pages on social networks such as Instagram, Facebook, Twitter and Youtube that strengthen the dissemination of information and direct users to access its website.

As far as apps are concerned, the most accessed and downloaded in the Play Store are: Coronavirus SUS with more than 10 million downloads and the app Data for Good from the Pain Network with more than 1000000 downloads. The coronavirus SUS is the official application of the Ministry of Health that aims to raise awareness of the population about the coronavirus and covid 19 with information such as symptoms, prevention strategies and what conduct to adopt in cases of suspected or confirmed infection. It also has maps directing the user to health units closer to their region. The app's score on the Play Store is 3.6, on a scale of 1 to 5.

Data for Good is an app aimed at preventing new cases by containing the spread of the virus. In this can be carried out the scheduling of rapid tests, self-assessment, contains information on the epidemiological data of the region, strategies for prevention and guidance on how to promote mental health in times of pandemic. So far the application has performed more than 1 million and two hundred thousand people to perform the self test, referred approximately 300 thousand people to perform the RT-PCR test, and of these, 20% had the positive result (60 thousand people).

It is noticed that in recent years the use of mobile applications has been increasing in Brazil.^{9,10} The ease and speed in transmitting the information of a content is one of the main benefits reported by users. What should be discussed is the reliability of the applications available for use, because until then there is no regulation that supervises the veracity of the messages disseminated in these APP. One of the strategies to be used is to see the level of user satisfaction before downloading it.

A study¹¹ corroborates these findings by showing that the use of social media has increased greatly during the pandemic, especially among the elderly population, considering this experience as a successful practice for health communication. The study also shows that digital tools reduce inequalities in access to technology and become a comprehensive and infinite source of

knowledge. In particular, for the elderly population, who remain engaged in the network for a longer time, resulting in digital inclusion and the learning of new skills.

Researchers state that the internet has become an indispensable tool in the propagation of information, in a period in which it was necessary to maintain social isolation and reduce interactions in public to avoid crowding.¹² The main obstacles reported by them were the lack of mastery of some users with digital technology and the instability of the network in some regions. However, this situation served to show the capacity of readjustment and reinvention of the human being to the new conditions.¹³⁻¹⁴

Therefore, it is extremely important that there is the constant process of evaluation, development and analysis of the usability of these applications in order to make these devices accessible to the entire population, regardless of age or background.

It is worth mentioning that this is an environment conducive to the exchange of information and also favors the dissemination of Fake News, which can negatively influence the maintenance of health care practices of the population, since the process of consolidation of knowledge about covid-19 is still under construction. In this context, the effect of disinformation should be disastrous and the spread of fake news should be monitored by government authorities, not encouraged as is perceived in some cases.

Final Considerations

The social isolation resulting from the pandemic caused by the new coronavirus and its variants has enhanced the use of technology in all its forms, thus becoming more frequent in the lives of Brazilians, in all their ages. In this context, digital tools have become the ideal ally for the acquisition of new information, and thus promote the prevention, self-care and control of the virus. Currently, mobile app and website development are on the rise. The present study chose to research national websites and mobile applications that promote the dissemination of information about covid-19, in order to know the reaction and the impact they have on the Brazilian population.

In this sense, the use of these technologies has brought several benefits to the health of the population through the availability of some digital tools, which were implemented to make effective the self-care of the population such as: self-screening, self-assessment and referral to nearby health units, and avoiding unnecessary visits to health facilities during the COVID-19 pandemic. The devices also help information to be passed faster, almost in real time, using accessible language and attractive elements, which attract the reader's attention, in addition to being a means to prevent diseases.

The choice of this theme to do the research was due to the author's interest in the use of digital technologies for the propagation of information, facilitating communication strategies and providing the user with the discovery of new knowledge. The inspiration came after reading the text *Herramientas digitales como un aliado informativo en el Perú para el autocuidado en tiempos de COVID-19* by Ramos and Carrasco⁹, as part of the discussion of the points of the discipline of Education and Communication in Health, of the doctoral discipline of the Institute of Collective Health, of the Federal University of Bahia.

As a limitation of this study, we can highlight the time in which it was performed. Because it was made already in 2022, some information related to access in the year 2020 was impaired, since the SimularWeb application only provides the retroactive information in up to one year. Another point that could also be addressed is the access in relation to social networks (Youtube, Instagram, Twitter, Facebook, among others), which due to the short time to carry out the work, can not be done in a timely manner.

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