**ABSTRACT:**

Health literacy is a discrete form of literacy and becoming an increasingly important aspect for social, economic, and health development. Health literacy is already seen as a crucial tool for the prevention of non-communicable disease with investments in education and communication. The dominant explanation for this trend is increased change in clinical and public health sectors of literacy. Greater knowledge and accessible information regrading noncommunicable diseases are allowing citizens to take the necessary precautions and strive for living a healthier life style. Today with the rapid development of coronavirus disease 2019 (COVID-19), there has been a need for people to acquire and apply health information, and adapt their behavior at a fast pace. Health communication intended to educate people about precautionary measures to take for getting or spreading the infection has become widely available. However, there is also misinformation, and individuals are considered to be able to acquire, understand, and use this information in a sound and ethical manner, or in other words to be health literate. We used data from United States Census Bureau, Internal Revenue Service (IRS), Centers of Medicare and Medicaid Services, and National Science Board, to measure literacy and health care access across The United States of America. With the help of regression models, we were able to analyze the correlation between literacy and COVID-19 case count across the country. We saw with an increase white collar jobs, education, and health care access, there was a decrease in number of cases across the country. These states with a higher literacy rate, also showed lower chance of the state COVID-19 case count being above the national average.

**INTRODUCTION:**

A 29-year-old Black woman with three days of abdominal pain and fever was brought to an emergency room by her family. After a brief evaluation, she was told that she would need an exploratory laparotomy. She subsequently became agitated and demanded to have her family take her home. When approached by staff, she yelled, “I came here in pain and all you want is to do is an exploratory on me! You will not make me a guinea pig!” She refused to consent to any procedures and later died of appendicitis. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

A exploratory laparotomy is surgery to open up the abdomen in order to find the cause of the symptoms, that testing could not diagnose. If the cause of the problems is discovered, treatment is often done at the same time. This procedure was misunderstood as a laboratory experiment by the patient, showing a lack of health literacy. (<http://myhealth.ucsd.edu/3,40432>)

The first use of the phrase “health literacy” occurred in 1974, began appearing in academic peer-reviewed literature in the early 1990s, and has experience exponential growth ever since. This has indicated a growing internationalization of the field of health literacy – a field that has been dominated by the United States.

However, as the field of health literacy has expanded in scope and depth, the term “health literacy” has come to take different meaning to various audiences, becoming a source of confusion and debate. In 1999, the American Medical Association’s Ad Hoc Committee on Health Literacy, defined the term as “constellation of skills, including the ability to perform basic reading and numerical tasks required to function in the health care environment” including “the ability to read and comprehend prescription bottles, appointment slips, and other essential health related materials”. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831571/>) The definition used by Healthy People 2010, Institute of Medicine (IOM), and Network of the National Library of Medicine were similar: “The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions”. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>) These definitions refer to health literacy as a set of individual capacities, which are both the innate potential of the individual, as well as his or her skills. An individual’s health literacy is mediated by education, and its adequacy is affected by culture, language, and the characteristics of health-related settings. Creating health literacy as a shared function of cultural, social, and individual factors. Showing that the causes and remedies for limited health literacy rest with out cultural and social framework, the health and education systems that serve it, and the interactions between these factors. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

The first domain within health literacy is individual capacity, which is the set of resources that a person has to deal effectively with health information, health care personnel, and the health care systems. Individual capacity has two components: reading fluency and prior knowledge. Reading fluency is the ability to mentally process written materials and form new knowledge. The National Adult Literacy Study (NALS) defined reading fluency through 3 skill sets: the ability to read and understand text, the ability to locate and use information in documents, the ability to apply arithmetic operations and use numerical information in printed materials. Prior knowledge is composed of vocabulary and conceptual knowledge (e.g. what is cancer and how does it injure the body). Therefore, individuals will understand written and spoken communication better if they are familiar with the words and concepts presented. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1831571/>)

The second domain in health literacy is culture and society. The term “culture” refers to the shared ideas, meaning, and values acquired by individuals as members of society. Cultural, social, and family influences are critical in shaping attitudes and beliefs. In health literacy, cultural and society influence is how people interact with the health system and help determine the adequacy of health literacy skills. Culture and society are defined through native language, socioeconomic status, gender, race, and ethnicity, along with influence of mass media as represented by news, publishing, advertising, marketing, and any health information available through electronic sources. These are conditions over which the individuals have little or no control but they influence the ability to participate fully in a health-literate society. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

The third domain in health literacy is the education system. In the United States, the education system consists of K-12 system, adult education programs, and higher education. K-12 education is charged with the development of literacy and numeracy skills in English, which form the foundation for complex comprehension and application in the later grades. Adult education programs provide opportunities for individuals who drop out of K-12, who completed high school but did not acquire strong skills, who did not have full school opportunities, or for immigrants who may never had access to education so wish to learn, speak, read, and write English. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

The last domain in health literacy is the health care system, which includes all people performing activities such as health-related messages and action plans, rights and responsibilities are shaped, research initiates are begun, health-promoting recommendations are developed and supported, access is monitored, and regulations are enforced. The is consistent evidence supporting the notion that health literacy affects the interaction of individuals with health contexts and the health-care system, and may further affect health status and outcomes. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

In summary, according to findings in Health Literacy: A Prescription to End Confusion, the committee states health literacy is defined based on the interaction of individuals’ skills with health contexts, the health-care system, the education system, and broad social and cultural factors at home, at work, and in the community. Moreover, the committee concludes that the links between education and health outcomes are strongly established. (<https://www.ncbi.nlm.nih.gov/books/NBK216035/>)

Today health literacy is already a crucial tool for the prevention of non-communicable disease with investments in education and communication sought to be sustainable, long-term measures starting early in the life course. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7156243/>) However, the question exists on the same efficiency with communicable diseases. These are illnesses caused by viruses or bacteria that people spread to one another through contact with contaminated surfaces, bodily fluids, blood products, insect bites, or through the air. Some examples of communicable diseases include HIV, hepatitis A, B, and C, measles, and salmonella. Most common forms of spread include fecal-oral, food, sexual intercourse, insect bites, contact with contaminated fomites, droplets, or skin contact. (<https://www.ncbi.nlm.nih.gov/books/NBK470303/>)

Today the world is seeing a unprecedented pandemic caused by the communicable disease called Coronavirus (COVID-19). An infection caused by a newly discovered coronavirus, which causes mild to moderate respiratory illness. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. Elderly and individuals with underlying medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. (<https://www.who.int/health-topics/coronavirus#tab=tab_1>)

Rapid development of the virus into a pandemic has called for people to acquire and apply health information, and adapt their daily life at a fast pace. Sporting events were canceled, classes and occupations went virtual, and retails were closed. Health communication intended to educate people about the severe acute respiratory syndrome coronavirus 2(SARS-CoV-2), prevention, and symptoms became widely available. With most valuable information distributed as easy-to-understand manner that offer simple and practical solutions, such as washing hands, maintaining social distance, and where to find latest news, recommendations, and advice. Unfortunately, there has also been complex, contradictory, and false information spreading in todays technology driven world. Individuals have to acquire, understand, and use the information in a sound and ethical manner to be health literate. However, COVID-19 has highlighted that poor health literacy among a population is a global public health crisis. In Europe, nearly half of adults reported having problems with health literacy and not having relevant competencies to take care of their health and that of others. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7156243/>)

With COVID-19 two aspects of health literacy have emerged. First globally, health literacy is as important for the prevention of communicable disease as it is for non-communicable diseases. Second, along with system preparedness, individual preparedness is key for solving complex real-life problems. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7156243/>)

**MATERIALS AND METHODS:**

**RESULTS:**

**DISCUSSION:**

**REFERENCES:**