PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

ABDELHAMID IBN BADIS UNIVERSITY –MOSTAGANEM

FACULTY OF FOREIGN LANGUAGES

DEPARTMENT OF ENGLISH

Covid-19 Vaccine and Persuasion Strategies in the Algerian Newspapers Echourouk and Ennahar

A dissertation submitted in partial fulfillment of the requirements for theMaster's Degree in "Sciences du Language"

Submitted by

KELLEL SABIHA

Board of Examiners:

Examiner: Mrs. GHERNOUT Soumia	University of Mostaganem
Chairperson: Prof . HAMERLAIN Souad	University of Mostaganem
Supervisor: Mrs. KAID OMAR Zohra Latifa	University of Mostaganem

Academic year: 2021/2022

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

ABDELHAMID IBN BADIS UNIVERSITY –MOSTAGANEM

FACULTY OF FOREIGN LANGUAGES

DEPARTMENT OF ENGLISH

Covid-19 Vaccine and Aristotle's Persuasion Model in the Algerian Newspapers Echourouk and Ennahar

Corrected as suggested by the chairperson

A dissertation submitted in partial fulfillment of the requirements for theMaster's Degree in "Sciences du Language"

Submitted by

KELLEL SABIHA

Board of Examiners:

Examiner: Mrs. GHERNOUT Soumia University of Mostaganem

Chairperson: Prof . HAMER LAIN Souad University of Mostaganem

Supervisor: Mrs. KAID OMAR Zohra Latifa University of Mostaganem

Academic year: 2021/2022

Dedication

I affectionately dedicate this work to my dearest parents, my sisters and brothers and their wives and children. I also present sincere thanks to my small family, my children and the apple of my eye, Abderrahim, Mohamed Abdul-Aziz and Fatima Zahra for their help and moral support. I am also indebted to my husband, who supported me in the most difficult moments of my life.

Acknowledgments

I would like to express my deep thankfulness to my supervisor Mrs KaidomarZohra Latifa , not only for her guidance, but also for her psychological support, patience and precious advice.Thankyou for encouragingme to carryout this research.

I would like to thank my teachers at Abdelhamid Ibn Badis University who provided me with helpful advice andsuggestions throughout the research. I am also grateful to the members of the jury for evaluating my work.

Abstract

The emergence of COVID-19 pandemic has a serious impact on people's health and lives. Governments worldwide adopted preventive measures and pharmaceutical companies developed vaccines in a record time to control the spread of COVID-19. Although the governments succeeded to implement some preventive measures, vaccines against COVID-19 were received with hesitancy. To overcome people's skepticism about COVID-19 vaccines, the media played a crucial role to encourage the vaccination campaign. This study discusses the rhetorical strategies used in the Algerian print media to persuade people to get vaccinated. Using Aristotle's persuasion model based on the logical, the ethical and the pathetic appeals, two Algerian online daily newspapers Ennaharand Echourouk were used in this study. 109 articles were assembled and analyzed from January to March 2021. Findings revealed that Echourouk newspaper used more persuasion strategies than Ennahar newspaper to encourage the vaccine uptake. The logical appeal was the strategy used most by both newspapers.. Findings suggest that the selected newspapers provided a discursive support to the Algerian vaccine management policy by encouraging people to get vaccinated.

Key words: Covid-19 vaccine, print media, Aristotle persuasion model, vaccine skepticism

Table of Contents

Dedications……..…….…… ……..……....I

Acknowledgements…….....II

Abstract……...……..…III

Table of Contents…….....IV

List of Figures ……..…....VI

List of tables ……..…. VII

List of abbreviations …… VIII

General

introduction…….……..**Erreur ! Signet non défini.**

Chapter one : literature review : Covid-19 vaccine and the media

1.1Introduction…….…..….3

1.2 Covid-19 pandemic …….…....3

1..3 Covid-19 vaccine …….…..4

1.4Types of Covid-19 vaccines ……..….4

1.5Covid-19 Vaccine hesitancy …….. ……..…5

1.6Attitudes towards the Covid-19 vaccine ……8

1.7 Governments' measures towards the Covid-19 vaccine:……..…….…..9

1.8. Media and the Covid-19 vaccine: ……11

1.9. Persuasion in media discourse……..…12

1.10.Conclusion…….....14

Chapter two : Research methods

2. 1Introduction ……..…15

2.2 Research methods…….....15

2.3 Sample of The Study……..15

2.4 Procedure……..…16

2.5 Methods of Data Analysis ……..…..….17

2.6 Aristotle's persuasion model:……18

2-6-.1-Ethos (ethical appeal):…….18

2-6-2 Pathos (or the emotional appeal) ……18

2-6-3 Logos (or the logical appeal)……....19

2.7 Conclusion……21

2.8 Limitations……..20

Chapter three : findings and data analysis

3.1 Introduction…….....22

3.2 Findings ……...22

3.2.1 Echourouk newspaper …….....22

3.2.2 Ennahar newspaper……..….23

3.2.3 Persuasion strategies used in Echourouk and Ennahar newspapers……..……25

.3-2-3.1 The use of Logos in Echourouk newspaper…….....…25

3.2.3.2 The use of Ethos in Echourouk newspaper…….27

3.2.3.3 The use of Pathos in Echourouk newspaper…….....28

3.2.3.4 The use of Logos in Ennahar newspaper……..…30

3.2.3.5The use of Ethos in Ennahar newspaper…….…30

3.2.3.6 The use of Pathos in Ennahar newspaper…….31

3.3Discussion……..….....33

3.3.1 A comparison between persuasion strategies used in Echourouk and Ennahar newspapers...35

Generalconclusion……..…36

Recommendations …….……....37

Bibliography……..38

Appendices…….…..…...45

List of Figures

Figure .1: Factors associated with Covid-19 vaccine hesitancy…….....7

Figure .2; Articles selection flow chart……....17

Figure 3..Rhetorical strategies and their linguistic devices…….…....20

Figure 4: Types of persuasion strategies in Echourouk newspaper for February coverage…….29

Figure 5 Types of persuasion strategies in Echourouk newspaper for March coverage …….29

Figure 6 : Types of persuasion strategies in Ennahar newspaper for February coverage ……..32

Figure 7 ;Types of persuasion strategies in Ennahar newspaper for March coverage ……...32

Figure 8 : The use of evaluative lexis in both Echourouk and Ennahar……..….33

List of Tables

Table1: Distribution of thematic focus in Echourouk (February;2021)……...22

Table 2: Distribution of thematic focusin Echourouk (March;2021) …….23

Table 3: Distribution of thematic focusin Ennahar (February;2021) ……..…24

Table 4: Distribution of thematic focusin Ennahar (March;2021) ……..…24

List of abbreviations

WHO: World Health Organization

NPIS: Non Pharmaceutical Interventions

FDA: Food and Drug Administration

WHA: World Health Assembly

CDC: Centers for Disease Control and Prevention

SAGE: Strategic Advisory Group of Experts

VHS: Vaccine Hesitancy Scale

The general introduction

The spread of the Corona virus disease 2019 (COVID-19) has affected all aspects of life across the planet. Countries around the world have implemented strict preventive measures such as, social distancing and mandatory use of face coverings to contain the spread of COVID-19. However, such measures proved insufficient to halt the spread of the disease .

In short period of research, many laboratories across the world have introduced vaccines against the disease, such as China (Sinovac), Russia (SputnikV), Britain (AstraZeneca), and Germany (Pfizer-BioNTech). Prepared in such conditions, these vaccines received little acceptance by people at first. Yet, the lack of clinical trials to test the effectiveness of those emergency-released vaccines has posed a challenge to build public trust over getting vaccinated. For example, the French people manifested against the state's pressure to get vaccinated and the Algerian people showed a low rate of vaccination. The Algerian Minister of Health Abderrahmane Benbouzid revealed that about 29 million doses of Covid-19 vaccines were imported in Algeria, but only 15% of the population got vaccinated (Algerian Ministry of health,2021)

The Algerian state has used different strategies to encourage people's vaccination, from importing different types of Covid-19 vaccines, to using mobile vaccination in each district and organizing awareness campaigns. Despite such efforts, people remained reluctant to get vaccinated. Djamel Benbahmed, Algeria's Minister for the pharmaceutical industry declared (November, 2021) that, although Algeria has lost more than four thousand lives due to the Covid-19 pandemic, Algerians are still hesitant about the vaccine.

Part of the strategies used to persuade people to get vaccinated was the media. Hart et al '2020) showed that in order to shape public opinion about health risks and enforce behavioral changes, the mass media should play a very significant role.

Although many studies were conducted to examine media coverage of Covid-19 (Daniel Catalan-Matamoros & Carmen Peñafiel-Saiz (2019), Walid Al-Qerem & Tareq L. Mukattash (2022) , Mohammad B. Nusair, Rasha Arabyat, et al (2022), few investigations focused on print newspapers and the persuasion strategies used in covering Covid-19 vaccine. Also, most studies on media coverage of Covid-19 have been focused and conducted in the western world, but little was done in the Arab-speaking region. Therefore,

this study aims at filling this gap and study the use of persuasion strategies in covering Covid-19 vaccine by Algerian Arabic newspapers. To fill in this research gap that this study addresses the following research questions:

1. Did the Algerian online daily Arabic newspapers Ennahar and Echourouk use persuasion strategies to encourage Covid-19 vaccine?

2 .If yes, what persuasion strategies did they use?

In the light of the literature review on media discourse, the following hypotheses are advanced:

1. The Algerian on line newspapers Echourouk and Ennahar used persuasion strategies to encourage Covid-19 vaccine.

2. The persuasion strategies used by the newspapers are focusing on risks and fear to encourage the people getting vaccinated.

To answer the research questions, 109 articles from Echourouk and Ennahar were qualitatively analyzed using the Aristotle's model of persuasion.

The research is divided into three chapters. The first chapter reviews studies and media coverage of Covid-19 vaccination. The second chapter is devoted to the research methodology. It provides a detailed description of the sample, data collection methods, procedure and the tools for data analysis. It also presents the delimitations and limitations of the study. The last chapter analyses and discusses the findings and presents suggestions for future research.

Chapter one: the literature review

Media and the Covid-19 vaccine

1.1 Introduction

The purpose of this chapter is to examine relevant literature regarding the Covid-19 pandemic and its devastating impact globally. It presents the main types of the vaccines introduced in a short period of research. It also sheds light on vaccine hesitancy, and its association with different personal, environmental and political factors. In addition to that, the current chapter provides a brief description of different measures to promote vaccine's uptake and the way media is mobilized to influence people's attitudes and perception towards Covid-19 vaccination.

1.2 Covid-19 pandemic

Sever acute respiratory syndrome corona virus 2 (SARS-COV-2) is the causative virus for the corona virus 2019 (Covid-19) ongoing pandemic. SARS-COV-2 first emerged in late 2019 in Wuhan (Hubei, China) and hastily becomes a global threat affecting 220 countries. As of 29 June 2021, there had been more than 181 million reported infections with, SARS-COV-2 and nearly 4 million reported deaths worldwide (Bartsch et al., 2020; Britton et al.,2020; Kwok et al., 2020) . The pandemic has resulted in a devastating impact internationally, which urged the need for mitigation policies to contain the pandemic. The ground strategy followed by most countries around the world was to reduce the transmissibility of the disease, often by no-pharmaceutical interventions (NPIS), including enforcing mask policy, hand sanitization social distancing, travel restrictions, school's closures, and partial or complete lock-down.

Although the preventive measures helped slow down the progression of the disease, the most promising strategy to confine the pandemic and to provide hope to reduce the mortality rates remains within the capacity of medical technology. The later includes effective, safe, and affordable antiviral agents and vaccines. Vaccines are one of the most reliable and effective public health interventions ever implemented that are saving millions of lives each year (WHO, 2021)

1-3 Covid-19 vaccine

Today's world is in the middle of a pandemic caused by the drastic spread of SARS-COVID.2, which has created an unprecedented global public health and economic crisis.

Successfully inoculating a large population in affected countries is one of the most effective ways to contain the impact of the Covid-19 virus (Callaghan et al., 2020; Thigpen and Funk, 2020), followed by other preventive measures, such as enforcing strict quarantines, lockdowns following social distancing measures and ensuring community-use of face masks. In the absence of definitive treatment, vaccination against Covid-19 emerged, as an effective solution to the spread of the pandemic.

There are no particular antiviral treatments for Covid-19 and only a few of the already used therapies have demonstrated the ability to decrease mortality in critical patients (eg : corticosteroids). Additionally, compliance with social distancing and prolonged use of face masks is not guaranteed. Thus, vaccination has been critical in potentially putting an end to the Covid-19 pandemic.

The Covid-19 vaccine is a vaccine intended to provide acquired immunity against sever acute respiratory syndrome Corona Virus 2 (SARS-COV-2). Vaccines generally take years to develop before reaching clinical application stage, but in 2020, scientists embarked on a race to develop safe and effective corona virus vaccines in the possible quickest period. Among the vaccines that have been licensed for use in an emergency, Pfizer-vaccine has a 96% efficacy rate, while the vaccines of Moderna and Astra Zeneca-Oxford claim efficacy rates of 94.10% and 70 % respectively. Meanwhile, Russia's Sputnik-V was revealed to have 92% efficacy rate. (World Health Organization, 2020)

Quickly, after the SARS-COV-2 virus discovery, an extraordinary amount of work has been accomplished. The scientific community has initiated over 300 vaccines projects. 40 vaccines are now being evaluated in clinical trials, several have already received approval from the Food and Drug Administration (FDA) and others are being used in many countries (WHO, 2021).

1 -4 Types of Covid-19 vaccines

There are three main approaches to designing a vaccine. Their differences lie in whether they use a whole virus or bacterium, just the parts of the germ that triggers the immune system or just the genetic materials that provides the instructions for making specific proteins and not whole virus. In this context, the Covid-19 vaccines that are

currently the most advanced are using four different approaches: Viral Victor, RNA, Whole Virus, and Protein Subunit.

First, Viral Vector vaccines use harmless virus by introducing part of the disease-causing virus genetic code, such as the code for Covid-19's « Spike » protein. This harmless virus transports the code into our cells and triggers an immune response, priming our immune system to attack the real virus later. The first viral vector vaccine to be approved for Covid-19 is Oxford-Astra-Zeneca. More are in late stage research such as Johnson & Johnson.

Second, RNA vaccines use genetic material-either RNA or DNA to provide cells with the instructions to make the antigen. In the case of Covid-19, this is usually viral spike protein. This prompts our immune system to respond, and in doing so, it learns to protect against future Covid-19 infection. Two RNA Covid-19 vaccines have been approved for use: Pfizer- Biontech and Moderna. Both have reported high levels of vaccine efficacy around 95% (WHO, 2020).

Third, whole virus vaccine use two main approaches: live attenuated vaccines use a weakened form of the virus that can still replicate without causing illness. Inactivated vaccines use virus whose genetic material has been destroyed. So they cannot replicate, but can still trigger an immune response. Some of the most advanced inactivated Covid-19 vaccines include Sinovac, Bharat Biotech and two by Sinopharm.

Finally, protein subunit vaccine is one that only uses the very specific parts (the subunits) of virus or bacterium that the immune system needs to recognize. The subunits may be protein or sugars. Some of the most advanced Covid-19 vaccines using this approach include Novavax and Chinese Academy of Science.

Although vaccination is a major advance in terms of public health and reduction in mortality, its development in a short emergency period leads to vaccine hesitancy .

1-5 Covid-19 vaccine hesitancy

There is broad agreement within the global scientific community that most effective way to defeat the Covid-19 pandemic is through the mass vaccination of populations around the world. In May 2020, the 73rd World Health Assembly issued a resolution recognizing the role of extensive immunization as a global public – health goal for preventing, containing and stopping transmission of SARS-COV-2. Globally, there are now more than 125 vaccine candidates, 365 vaccine trials ongoing and 18 vaccines against

Covid-19 approves by least one country (CDC Centers for Disease Control and Prevention, 2020). Published research carried out largely in high- income countries cites concerns about the safety of vaccines against Covid-19, including the rapid peace of vaccine development, as one of the primary reasons for hesitancy (WHO World Health Organization, 2020). , (but data, from low-and middle income countries (LTMCs) have been limited).

The reluctance of people to receive safe and recommended available vaccines, known as « vaccine hesitancy » was already a growing concern before the Covid-19 pandemic Vaccine hesitancy was defined by the WHO Strategic Advisory Group of experts (SAGE) as " the delay in acceptance or refusal of vaccination despite the availability of vaccination service ". In other word, vaccine hesitation refers to behaviors of refusal of certain vaccines or their delivery with delay in context where vaccination services are functioning. Opinion polls as well as scholarly studies consistently show a considerable hesitancy towards vaccination in general and towards a COVID-19 vaccine (Tyson et al., 2020; Williams et al., 2020). Indeed, one international survey showed a drop in the numbers that said they would get a COVID-19 vaccine if available (from 77% in July to 73% in October; N = 18,000) (Ipsos, 2020). Similarly, another international survey indicated that 14.2% disagreed somewhat or completely with the statement "Accept COVID-19 vaccine if generally available," while 14.2% were neutral or had no opinion (N = 13,426), leading to the conclusion that "the current levels of willingness to accept a COVID-19 vaccine are insufficient to meet the requirements for community immunity" (Lazarus et al., 2020).

A framework developed from research done in high income countries, called « the 5C model of the drivers of vaccine hesitancy », provides five main individual person-level determinants for vaccine hesitancy: confidence, complacency, convenience (or constraints) risk calculation and collective responsibility. Promoting the uptake of vaccines (particularly those of Covid-19) requires understanding whether people are willing to be vaccinated, the reasons why they are willing or unwilling to do so, and the most trusted sources of information in their decision-making. Hence, the hesitation of vaccination depends on many factors. A review of the literature showed the following reasons for refusing vaccination against Covid-19 : conspiracy beliefs (e.g. : Covid-19 vaccine are intended to inject microchips) structural (e.g. : vaccine availability) and attitudinal barriers, mistrust of the vaccine's benefits and concerns about future unforeseen side effects,

knowledge about vaccination and availability of information (WHO, 2020). A review by Dubé et al additionally pointed to the following factors of vaccine hesitancy: subjective norms, religion, post experiences, communication, and media. A study conducted among US adults demonstrated that vaccine efficacy, adverse effects, protection duration, and national origin of vaccine, were associated with preferences for choosing a hypothetical Covid-19 vaccine (WHO, 2020). One way to study human behavior in relation to vaccination is to use the Vaccine Hesitancy Scales. Such measurements can be used widely to understand the correlates of vaccine hesitancy, and its association with different personal, environmental and political factors. MacDonald, Eskola et al.(2020) captured the association of the aforementioned factors with vaccine hesitancy in the following figure:

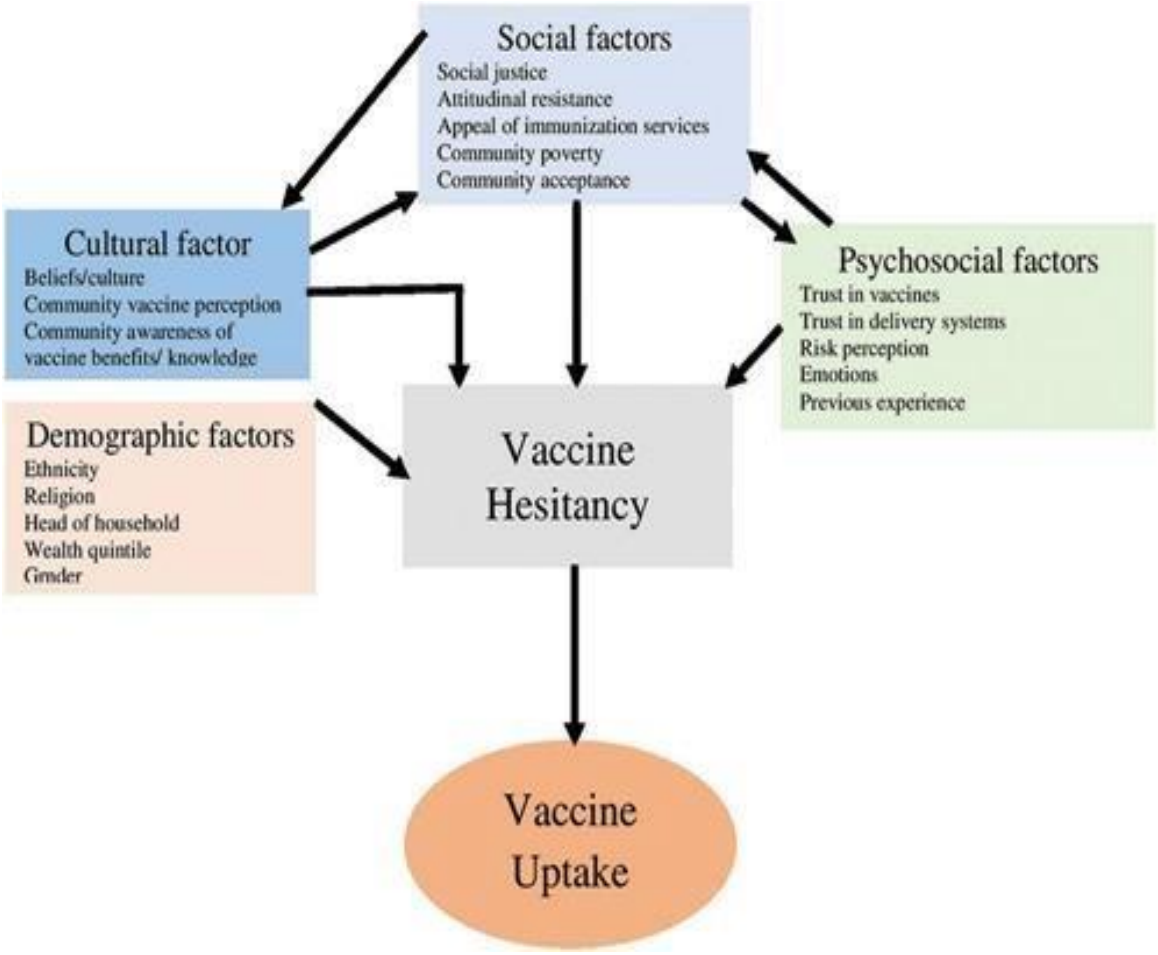

Figure 1: Factors associated with Covid-19 vaccine hesitancy(source: Soares P, Rocha JV, Moniz M, et al. Vaccines (Basel). 2021p. 23)

1-6 Attitudes towards the Covid-19 vaccine

Research to date suggests that people's acceptance of Covid19 vaccination varies substantially between countries (WHO, 2020) .Vaccine hesitancy usually accounts for a more substantial share of the population who will not be vaccinated than vaccine resistance (those who object to vaccines). For instance; in the United States, 21 percent were probably willing and 31 percent were not willing to have the Covid19 vaccine (Eur J Epidemiol,2020) While nationally representative surveys in the United Kingdom reported 25-27per cent were hesitant and 6-9 per cent were resistant (Evans, W. and J. French ,2021), and in Canada reported 19 percent somewhat likely; 9 percent did not know and 14 percent unlikely to get the Covid19 vaccine (Halabi, S., A. Heinrich and S. Omer ,2020), A cross national representative survey of over 7000 participants in seven European countries (Denmark, France, Germany, Italy, Portugal, the Netherlands, and the U.K) reported that across these countries, 19 percent were hesitant (not sure) and 7 percent would not get vaccinated. However, there were substantial variations between countries with vaccine hesitancy 12-28 percent while resistance ranged from 5-10 percent (WHO, 2021) . In Australia, vaccine hesitancy to a Covid19 vaccine has been reported at 9 percent and vaccine resistance 5 percent, however this evidence was from a non-representative online survey (WHO, 2020)

Recently, a study in Italy regarding students' attitudes towards vaccination found that one out of every ten students had a poor intention to vaccination (WHO,2020). Besides, according to the same source, a study revealed that 79,6% of surveyed public university students in Canada were willing to get a Covid-19 vaccine. Another study in Vietnam claimed that 77,1% of sampled students were eager to be vaccinated against Covid-19 (Cinelli, M. et al. (2020), In Algeria, a recent study published in July 2021, described the profile of Covid-19 vaccine acceptability among the Algerian population (49% of participants were healthcare workers) found that 33,5% agreed to get the vaccination (Algerian Health Ministry,2021). They determined that two thirds of Algerians are unlikely to be engaged in Covid-19 vaccine uptake, marking them one of the most resistant populations to voluntary vaccination in Arabic countries. However the vaccine campaign's success depends on the vaccination on rates.

Despites its availability, the public acceptability of the Covid-19 vaccines created in short time remains uncertain (Blastland, M. et al.,p 2020). This hesitation is found world wide.Concers about the vaccine's efficacy or safety, the country of manufacture, anti-

vaccine movements, and the belief in rushed vaccine research were vaccination hesitation causes, in addition to rumors and misinformation

1-7 – Government measures towards the Covid-19 vaccine

European countries are divided on how to coerce citizens into getting vaccinated. Italy on Wednesday 27th December, 2020 made Covid-19 vaccination mandatory for people from the age of 50, with teachers and public health workers already obliged to get the shot. British Prime Minister Boris Johnson slammed those who refuse vaccination, but said he would not force anyone to get a job.

Countries that had moved towards compulsory vaccinations such as Italy and Austria had lower vaccination rates than France. (Prime Minister Jean Castex). By the same token the French President Emmanuel Macron told « le Parisian » news paper earlier this week (7 January 2021) that he wanted to make the lives of those refusing the Covid-19 vaccine so complicated by squeezing them out of public spheres that they would end up getting jabbed. France's parliament has approved president Emmanuel Macron's plans for a Covid-19 vaccine pass to help curb spread of the Omicron variant after a tumultuous debate whipped up by Macron's comments that he wanted to « p » s « off » the unvaccinated.

The health pass, which is in the form of QRcode is used to gain entry into public venues such as restaurants and clubs. « we are not finished with the pandemic », Macron said in the televised speech. He said recent studies show that immunity from the vaccine decreases after six months. France has one of the highest vaccination rates in Europe with almost 75% of the adult population being fully vaccinated (consolidated data). Despite this figure, corona virus infections have shot up by 40% over the last week (Paris Ruters, January 4th, 2021). Until now France has enforced a Covid-19 health pass, which means in order to get into restaurants, cafes or cinemas or board trains, people need to either show a fresh negative test, or proof of vaccination.

In Algeria, the government has approved the Sinopharm and Sinovac Chinese vaccines and the Sputnik Russian vaccine. The national vaccination campaign started by the end of January 2021 for healthcare workers and vulnerable groups. The current local policy targets all the population of the country.

After an hesitancy period from January 31, 2021, where the vaccination were lunched with only 724, 812 persons 2 doses vaccinated in 8 months (Algerian Ministry of health,

2021), Algeria switched to a higher gear in the last months. The government has started a range of measures to accelerate the vaccination campaign. The first step was to insure the availability of vaccine. For this reason, the government has committed 20 billion Algerian Dinars (120 million) for this campaign. Also, it ordered 17 million doses of the Sinovac vaccines at the rate of 5 million doses per month. In parallel a convention with the Chinese part allows Algeria to manufacture the Sinovac vaccine locally, from September 2021 with capacity of 2.5 million doses per month. Before the government has also concluded a convention to manufacture the Sputink-v vaccine by the most important pharmaceutical company « Saidel » of the country (Algerian Ministry of health,2021)

The total number acquired until now is about 10 million doses including Sinovac, Sputnik-v and 1 million doses of the Astra-Zeneca vaccine-also, 60.000 of the Moderna vaccine were also sent by the USA of America. Reserved priority for healthcare workers and susceptible persons of more than 50 years, the vaccine is now addressed to all citizens.

In order to make this campaign successful, Algeria has employed its entire means to encourage the population to get vaccinated. TV and radios spotlights and social media were also used to sensitize the population. To facilitate the vaccination operation, a platform was first, created to find out vaccination appointments and about 8000 sanitary centers were reserved for this purpose. Also vaccination campaign was organized in mosques especially in the collective prayer of Friday and sport and cultural buildings. In addition, private pharmacist will also be approved to vaccinate. At last, vaccination in schools and universities and some administrative building will mandatory for all students and teachers. All these measures seem to be a good signs in the vaccination road and the battle against Covid-19 in Algeria.

1-8 Media and the vaccine

News media reporting is understood to play a central role during health emergencies. News coverage communicates risks to readers and shapes public perceptions through the amount, content, and tone of reporting. According to Laing (2011) and Rosella et al (2013) , pandemic policy-making requires rapid, iterative responses under conditions of knowledge deficit, as well as the coordination of multi-level public- health agencies and sectors (eg : hospitals, schools, and work places). In these complex circumstances, news media serve as a primary source of health information and uncertainties and connect health professionals, policymakers, and the public in critical ways. (Laing, 2011 Hoffman and Justicz, 2016) .

Since the beginning of the Covid-19 pandemic, there has been an abundance of information with nearly every media channel covering the latest developments. Information channels, both traditional and social media, are sharing vaccine information and may have been very influential in swaying public opinion as to whether people accept to be vaccinated or not.

During the Covid-19 pandemic, print media representations in covering health issues has play a role in shaping public understandings of risks, measures to limit disease spread, and associated political and policy discourse. For example, it has showen that traditional newspapers media coverage had a particular importance in relaying information or misinformation. A recent national survey in Spain in relation to Covid-19 health issues showed that newspaper information comes from the partisans and opponents of Covid-19 vaccine compared to those who receive information from social media (WHO, 2021). This is especially relevant because information and opinions from both vaccines 'partisans and opponents is frequently found in the media. In fact, the traditional media coverage and the rapid growth of the internet and social media have made it easier to find and disseminate immunization-related concerns and misperceptions (J Gen Intern Med. 2020).

Media increasingly exercises direct influence over individual opinion. In a study carried in the United States (Criss S et al, 2021) to examine the relationship between information channel and vaccine acceptance, the findings revealed that traditional channels of information, especially National TV , National newspapers, and local newspapers increased the likely hood of vaccine acceptance. That is to say, individuals who receive information from traditional media were most likely to accept the vaccine than those who

receive information from social media . This is not surprising given that the national newspapers are more credible and authority sources than the social media. Exposures to articles, websites and social media posts, even if they are brief, may discourage vaccine uptake or encourage risk perception and vaccine hesitancy. Buller and colleagues (2019) showed that facebook users appeared disproportionately swayed towards vaccine hesitancy due to narratives and emotional stories.

Although the research community has recognized the effectiveness of Covid-19 vaccination, the European population is still hesitant to take the vaccine. This is why eleven European countries have adopted mandatory vaccination program because of vaccine hesitancy. Different factors account for people's hesitancy among which the emergency- realized vaccines, the lack of information and fake news to mention just a few. The media are a powerful tool for speeding vaccine-related information.

The general public is highly interested in health news and the media are often used as the first source of information (Walker K, 2021) .Today, some people are still opposing to take the vaccines, despite the high rates of death due to the disease, and imposing health preventive measures. Vaccine uptake is considered public health challenge and vaccine skepticism is on the rise worldwide. In such a context, the media play important role in spreading information related to Covid-19 vaccine and in allaying fears that usually hover around during pandemics. In a study on the Nigerian mass media to assess the knowledge of the populace on Covid19, Olapegba et .al found that television, radio, and newspapers were the sources the most relied on for Covid-19 vaccine information. Another study has assessed the knowledge, perception and attitudes of Egyptians towards Covid19 knowledge (Hussein A, 2021) and found that majority of the respondents had good general knowledge about the mode of transmission and prevention of the disease with a strong influence of their awareness due to a massive campaign by the mass media and social media.

1.9. Persuasion in media discourse

Persuasion is an"act of conversion … convincing others, changing their views, shifting their ideal points along the imagined line" (Diamond and Cobb, 1999 p 225). Persuasion therefore has the ultimate objective of influencing people or making them embrace certain beliefs in order that they may either adopt new goals or abandon previous ones in favor of higher value goals, as presented by the persuader (Poggi, 2005, p23). In other words,

persuasion is a communicative process in which the persuader appeals to and attempts to change or reinforce the identity, perception, behaviors, beliefs and emotional state of the persuader. Aristotle's model offers a convenient model that explains how persuasion works in the media and how it is expressed using linguistic devices. . This model will be explained in the research method chapter (see p 18)

Persuasion in media discourses produces certain meanings and mobilizes public attitudes in a set direction. Logical appeals, for instance, are created to gather public support for a particular viewpoint, which propagates a specific cause. There are some researchers who have investigated the topic of persuasive strategies within the media landscape. One of them is Abbas (2008) who analyzed persuasive techniques used by Barack Obama on his presidential primaries speech. In his analysis, Abbas used Keraf's theory and he found some persuasive techniques that are used by Barack Obama. Those are suggestion (hypothesis), rationalization, identification and conformities. The adoption of different theory from this previous study will give deep understanding for the present research about persuasive strategies. Another researcher is Sari (2012) who used Aristotle's theory for analyzing persuasive strategies by prophet Muhammad in his religious sermon and she found all persuasive strategies used in Prophet Muhammad's sermon as proposed by Aristotle. They are: ethos, pathos and logos. The Prophet Muhamad used ethos strategy through the language by using pronoun to regard the audience as a part of him, stating name of God to show the consistency, showing comprehensive knowledge by describing point. To control the emotional audience as pathos strategy, he created feeling of audience by uttering word giving sense of extreme badness and other. Then for logos strategies, Prophet Muhamad emphasized it through the language. The present study attempts to give broader elements used by Aristotle in the print media landscape.

Recent research on the same theme includes Hari Kusmanto et .al (2021) investigation of Persuasion action strategies in Da'wah discourse on social media of Instagram The results of this study showed that there are many persuasion strategies used by Ustadz Hanan Attaki in da'wah through social media of Instagram. Their findings also revealed that in the era of global communication, the realization of Da'wah on social media can utilize persuasive language to influence speech partners so that the purpose of Da'wah can be successful.

Another research on persuasion in print media examines the role of the media in influencing public opinion from an inferential-pragmatic perspective (Douglas Mark Ponton, Vladimir Ozyumenko & Tatiana Larina, 2019) . It presents preliminary results of the study focused on representation of Russia in Western newspapers. Drawing on Critical Discourse Analysis and media linguistics the study centres around the linguistic means of construing ambiguity/uncertainty, viewed as a strategy of persuasion. Findings show that the focus on the semantics of certain groups of words and other textual features such as indefinite pronouns, epistemic modality, passive voice, present perfect tense, interrogative headlines are used in media texts to construe ambiguity which, in its turn, arguably aims at influencing public opinion and so realize persuasive discourses.

1.10 Conclusion

The Covid-19 pandemic brought to light that viral diseases have the potential of decimating millions of people in a short amount of time. The current pandemic context is surrounded by challenges. One of them is the development in record time of a vaccine for a new virus in which it is still spreading at alarming rates and constantly mutating, in which there is a need for the production and distribution of billions of doses.

Chapter two

The research methods

2.1 Introduction

The previous chapter presented a review of literature about the Covid-19 pandemic and the way it was covered by the media. It has showed that print media plays an important role in convincing the acceptance of the vaccines. It has also indicated the lack of research of the Covid-19 vaccine coverage by the Algerian print media. The current chapter addresses the way print media in Algeria represented the Covid-19 vaccine uptake. Specifically, it examines the use of rhetorical devices in the Algerian newspapers, using Aristotle's model of persuasion. Moreover, it shed lights on the sample, the procedure and the limitations this study has.

2.2 Research Method

The current study follows a qualitative approach because it aims at exploring print media persuading patterns for Covid-19 vaccine. A content analysis is used to examine Echourouk, and Ennahar Algerian newspapers articles covering covid-19 vaccine. Using Aristotle's persuasion model, this research examines the linguistic strategies that were designed to encourage Covid-19 vaccination.

2.3 Sample

The sample of the study consists of articles from Algerian daily newspapers Echourouk and Ennahar. Newspapers are considered an authentic material. Whether in print or in online version, they keep readers informed about the current issues. Since this study aims at examining the linguistic aspect of articles, newspapers offer a relevant sample for this study. AS Shahnaz &Imtiaz (2014) noted, newspapers not only as a cheap source of updated information, but also a rich source of linguistic data. Also, through newspaper articles, journalists convey the desired message using different communication devices (Rahmat, 2019).

The sample includes 109 articles retrieved from two daily online national newspapers in Algeria, namely Echourouk and Ennahar. The selection of these two newspapers lies on their high rates of readership which means that they can influence in the vaccination process. The choice of the online platform to get the sample is because of the practical retrieval of data through entering key words and the selected period. The newspapers are written in Arabic and were retrieved from Ennhar's and Echourouk's archives .The articles were selected on the basis of the headlines mention of the Covid-19 vaccine.

2.4 Procedure

Since both Ennahr and Echorouk possess an online platform, the selection and gathering of the articles of the print version was easy and practical. By entering the selected period of newspaper coverage (January, 31st to March, 30th) and the Arabic key words :

التلقيح ضد كورونا– محاربة كوفيد19 - القضاء على الوباء باللقاح - التخوف من اللقاح – الثقة في اللقاح – لقاح كوفيد

(Vaccination against corona virus , Covid-19 vaccine , vaccine hesitancy, vaccine trust) an overall of 109 newspaper articles from the databases of the two selected newspapers were obtained from Echorouk and Ennahar. The data have been collected during that specific period because the Algerian media generally and the print media specifically were mobilized to cover the news of the launching of the Covid-19 vaccination, including the hesitancy that accompanied it.

The Technique and criteria used for selecting articles are as follows:

The keywords used to collect articles were:

- التلقيح ضد كورونا– محاربة كوفيد19- القضاء على الوباء باللقاح – التخوف من اللقاح– الثقة في اللقاح – لقاح كوفيد

Covid-19 vaccine , vaccine hesitancy, vaccine trust

The articles selected were those who used those key words in the headlines and those limited to the Algerian context. The newspaper articles have been selected using the web searching technique. This technique helped get the relevant articles. To get Articles that are written primarily on Covid-19 vaccine I entered the search phrase "articles mentioning Covid-19 vaccine or vaccination against corona virus at least one or two times. This search technique resulted in 244 articles for both newspapers. Then a manual selection was needed to eliminate irrelevant articles. The articles on Covid-19 vaccine in an international context were excluded. Articles that matched the key words but were not focused on people's vaccination, such as the budget for the vaccination or the consequences of the vaccination campaign were also excluded.

After excluding 135 irrelevant articles, only 109 articles were taken for this study given their relevant content. The following figure summarizes the sample selection. The articles are written in Arabic. In the analysis I use my own translation.

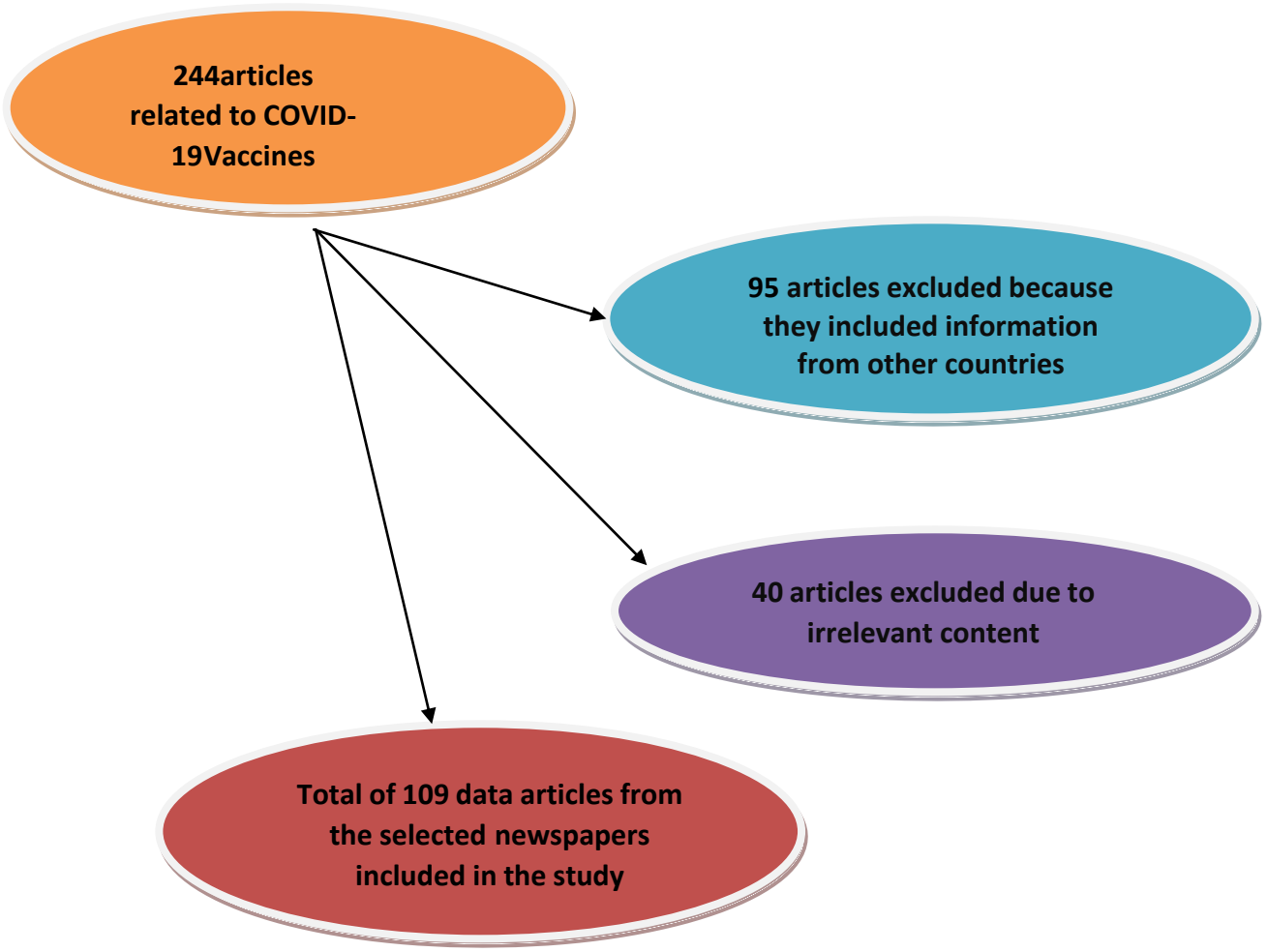

Figure 2: Article selection flow chart

2.5 Method of data analysis

Before presenting the way in which the articles were analyzed, it is necessary to describe Aristotle's persuasion model.

In his seminal work *The Art of Rhetoric*, Aristotle (1967) presented his model of persuasion. He distinguished three different persuasive strategies, namely logos (or rational argumentation), ethos (or reliability and credibility of the speaker) and pathos (or emotional appeal). These three appeals

aim to convince the addressee to reach "out of free choice" a goal desired by the addresser (Poggi, 2005, p 298). It is important to explain each appeal and the way they are expressed in language.

2-5-1-Ethos (ethical appeal): is the first strategy of Aristotle's theory. Aristotle (350 B.C.E) maintained that *ethos* is the nature of the communicator (Cited in Perloff, 2003). It is the appeal to the speaker's or writer's character or reputation. For example, a speaker who pays attention to his/her language, who chooses carefully his/her words is more likely to convince his/her audience by the idea he/she wants the addressee to accept. For instance, in this passage : "My three decades of experience in public service, my tireless commitment to the people of this community, and my willingness to reach across the aisle andcooperate with the opposition, make me the ideal candidate for your mayor." (yourdictionary.com), the introductory phrases "My three decades of experience" show that the speaker has reputation in public service and this makes him credible.

Foss (1996) states that *Ethos* has been defined as the trustworthiness and character of the speaker. It deals with "the effect or appeal of the speaker's character" (cited in Mohan 2013). In this case, the speaker's speech becomes believable by confessing his beliefs, value and also showing his personality. Hence, there are many ethos influencing factors in the speaker speech that are linked to his/her personality, characters or reputation.

Murthy (2014) identified two factors of *Ethos* that are the most common. These are: indigenous factor and adventitious factor. Indigenous factor is the inherent qualities of the speaker which include his physical appearance as well as his speaking and writing skills. The adventitious factor includes those elements which are acquired such as: education, knowledge and wisdom, character, expertise, and so on. Both of the indigenous and adventitious factor influence the credibility of the speaker.. In his discourse Aristotle calls Ethos the face of the orator which would impact on the audience by words, in other words it is a "*face created by the discourse*" (Mshvenieradze, 2013).

2-5-2-Pathos (or the emotional appeal)

Pathos refers to persuasion through generating or arousing emotions in the addressee. It is persuasion appealing by sentiment, "*pathos* concerns appeals designed to generate emotions in the audience (Foss, 1996; cited in Mohan, 2013). Aristotle regarded *pathos* as persuasive strategies because the human being influenced by emotions and feelings. With the help of *the emotional appeal, the* speaker can get connected emotionally with his /her audience. Keraf (2004) added that the addresser can arouse certain emotions but also can halter and prevent others. Therefore, before the speakers present their speech, they should prepare the text of persuasion that is suitable with the intended purpose. For example, in the passage "You will never be satisfied in life if you don't seize this opportunity. Do you want to live the rest of your years yearning to know what would have

happened if you just jumped when you had the chance?" (yourdictionary.com), the sentence: "will never be satisfied in life", is designed to arouse emotions of despair.

2-5-3--Logos (or the logical appeal)

In Aristotle's theory, *logos* is the argument speaker uses to persuade the audience. In order to be effectively persuasive, communication needs to be rooted, at least in part of logic and rationality. Because persuasion will then depend on the way the audience will process the information, the speaker should know that way of processing it.

According to Aristotle in Charteris-Black (2005), *logos* refers to the reasoning and evidence used to support certain argument. Proofs and logical reasons are more likely to convince the audience. For example, part of logical appeal, giving an example (showing some picture, data and other), use a specific number to make sure the audience (Murthy, 2014). Sweeney (n.d) cited some strategies to appeal to logic or reason such as: theoretical or abstract language, denotative meanings/reasons, literal and historical analogies, definitions, factual data and statistics, quotations, citations from experts and authorities and informed opinions. While *pathos* appeal to emotions, *Logos* appeal to convince the audience to realize the truth and even the audience can use the same tool to understand the hidden truth in the words of speaker (Murthy, 2014).

Thus, as a convincing method, speakers may use a combination of those persuasion strategies of communication; *ethos*, *pathos*, and *logos* as proposed by Aristotle. This requires that the speaker knows the mechanisms likely to enforce his/her credibility, arouse the desired emotions in his/her audience and build up a chain of reasoning that leads his/her audience to the desired goals and effects. The following figure summarizes the trio- ethos-pathos-logos and the different discursive strategies that they rely on

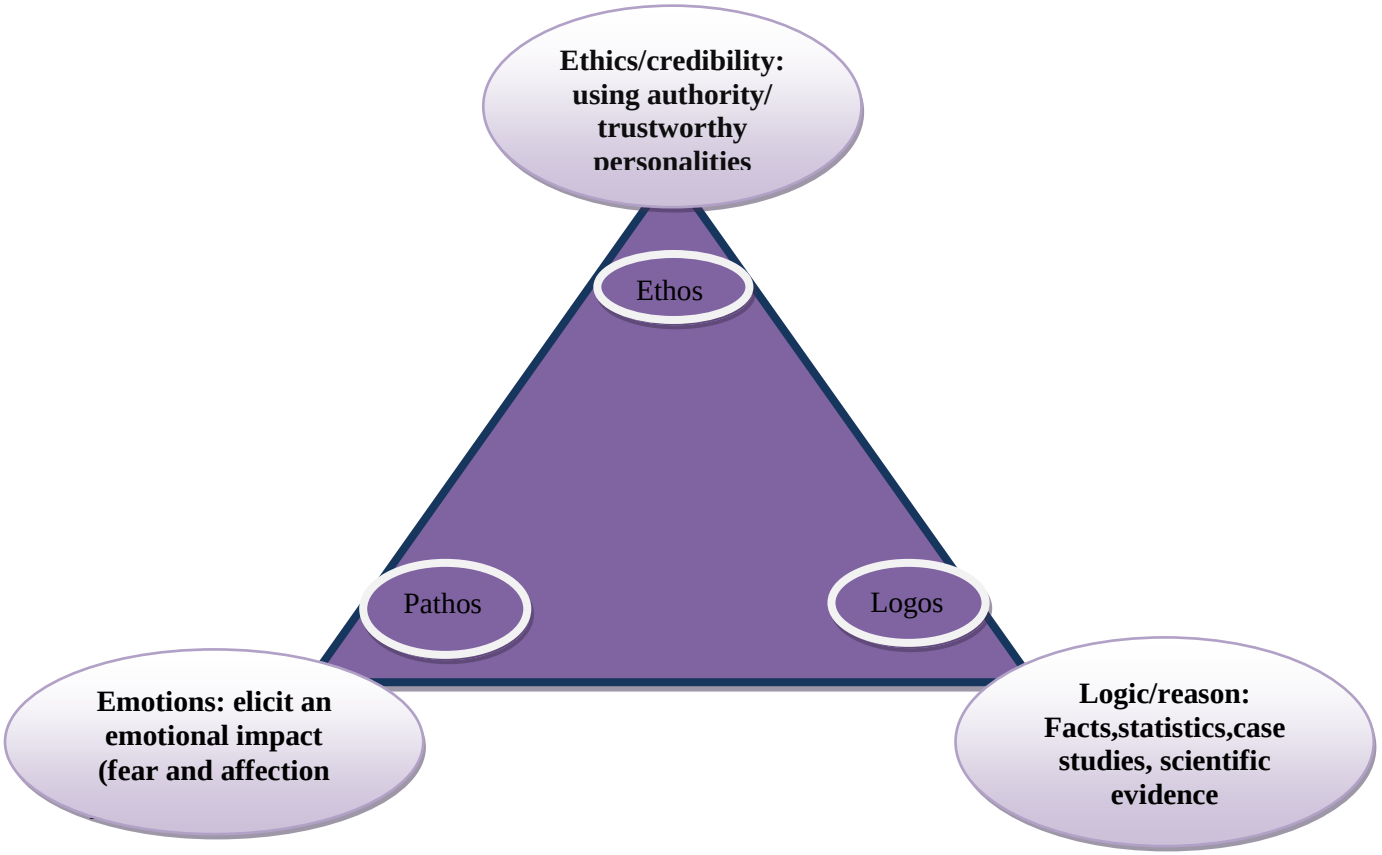

Figure 03: Rhetorical strategies and their linguistic devices

The Articles selected for this study were analysed using Aristotle's model explained earlier to examine the rhetorical devices used in covering Covid-19 vaccination.

Each article was read many times to identify the persuading patterns .Headings and sentences containing persuasion strategies were categorised according to the type of the rhetorical strategy being used , that is whether they used ethical appeal, logical or pathetic appeal.. For example, sentences which contain statements, such as facts, statistics, reasoning fall under Logical appeal..

2.8- Limitations

This study had some limitations that should be mentioned. First, the sample was confined to print articles from two online Algerian daily newspapers, namely, Ennahar and Echourouk. Future research may include other newspapers. Second, this study has focused only on print media and linguistic persuasive strategies. Future studies may examine other types of media and focus on other semiotic persuasive techniques. Third, the sample included articles written in Arabic and the Aristotle model of analysis is in English, consequently, there might be strategies of persuasion in Arabic that Aristotle's model cannot reveal. Other studies may use other models of analysis that fit the linguistic particularities of Arabic. Nevertheless, the findings of this study may offer a starting

point for developing a more comprehensive description of the persuasive strategies used by print media coverage of health issues .Also, whether the readers of those newspapers were convinced by the newspapers strategies is a topic for further research.

2.9- Conclusion

This chapter has presented the sample, procedure and method of data analysis to examine the rhetorical devices used by Algerian print media to cover Covid-19 vaccination. It has also provided a description of Aristotle's model and the linguistic choices that represent Aristotle's persuasion appeals. The limitations of this study has been stated to suggest avenues for future research. The findings and analysis of the selected articles will be presented in the subsequent chapter.

Chapter three
Findings and data analysis

3.1 Introduction

This chapter discusses the use of rhetorical elements in Echourouk and Ennahar newspaper articles published during two months from January 31st 2021, when the vaccine was first introduced into the country, to march 30th 2021 with a concentrated focus on building vaccine confidence. This part presents and analyses the findings in the light of Aristotle's persuasion model . It aims to examin the main persuasive patterns used in Echourouk and Ennahar coverage of the Covid-19 vaccine and vaccination process to help build trust in Covid-19 vaccine among the Algerian people.It concludes with recommendations.

3.2. Findings

With a total of 109 articles reviewed in both newspapers , a higher frequency of coverage was observed in Echourouk newspaper during the month of February (59 %) which was the month when the vaccine was first introduced to Algeria , with a subsequent decline in media coverage across the month for Ennahar newspaper. This is described in the tables below.

3.2.1 Echourouk newspaper

The tables 1and 2 show the number of articles according to whether the article focuses on Covid-19 only, or Covid-19 and the vaccine during the months of February and March**.**

Table 1: Distribution of thematic focus in Echourouk (February,2021)

Echourouk - February 2021			
Week	**Articles focusing Covid-19 vaccine**	**Articles focusing Covid-19 pandemic and the vaccine**	**Articles focusing only the Covid-19 pandemic**
1	**20**	**15**	**10**
2	**10**	**09**	**04**
3	**08**	**04**	
4	**06**	**04**	**05**
Total	**44**	**32**	**28**

Echourouk - March 2021			
Week	**Articles focusing on the Covid-19 vaccine**	**Articles focusing on the Covid-19 pandemic and the vaccine**	**Articles focusing only on the Covid-19 pandemic**
1	**05**	**06**	**04**
2	**10**	**03**	**04**
3	**06**	**02**	**05**
4	**04**	**03**	**04**
Total	**25**	**14**	**17**

Table 2: Distribution of thematic focus in Echourouk (March ,2021)

Out of 104 articles in Echourouk coverage of Covid-19 vaccine during February, 44 articles were focusing on the Covid-19 vaccine and vaccination. While 32 articles had focused on the Covid-19 pandemic and vaccines against it, 28 articles were excluded because they focused only on the Covid-19 pandemic. Consequently, only 76 articles were included for this study.

In March, Echourouk covered 56 articles about Covid-19. Among them, 25 articles were focusing on the Covid-19 vaccine and the vaccination. The number of articles with a focus on both the Covid-19 pandemic and the vaccines against this disease were 14 articles. 17 articles were excluded because they focused only on the Covid-19 pandemic. Consequently, only 39 articles were included for the current study.

Echourouk newspaper published more articles during the month of February than March. This may be due to the fact that February is the month that imidiately followed the introduction of the vaccine by the Algerian government.

3.2.2 – Ennahar newspaper

The tables below show the number of articles according to whether the articles present content focusing on Covid-19 only, or Covid-19 and the vaccine during the months of February and March.

Table 3: Distribution of thematic focus in Ennahar (February,2021)

Ennahar - February 2021			
Week	**Articles mentioning Covid-19 vaccine**	**Articles mentioning Covid-19 pandemic and the vaccine**	**Articles mentioning only the Covid-19 pandemic**
1	**10**	**02**	**03**
2	**08**	**03**	**02**
3	**07**	**03**	**01**
4	**02**	**01**	**01**
Total	**27**	**09**	**07**

The following table shows the number of articles published on March according to the same themes

Ennahar - March 2021			
Week	**Articles mentioning Covid-19 vaccine**	**Articles mentioning Covid-19 pandemic and the vaccine**	**Articles mentioning only the Covid-19 pandemic**
1	**04**	**02**	**01**
2	**03**	**01**	**01**
3	**02**	**00**	**00**
4	**04**	**02**	**01**
Total	**13**	**05**	**03**

Table 4: Distribution of thematic focus in Ennahar (March ,2021)

Compared to Echourouk , Ennahar's articles were less. Out of 43 articles in Ennahar coverage of Covid-19 vaccine during February , 27 articles were focusing on the Covid-19 vaccine and vaccination . While 09 articles had focused on the Covid-19 pandemic and vaccines against it, 07 articles were excluded because they focused only on the Covid-19 pandemic. Consequently, only 36 articles were included for this study.

In March, Ennahar covered 26 articles about Covid-19. Among them, 13 articles were focusing on the Covid-19 vaccine and the vaccination . The number of articles with a focus on both the Covid-19 pandemic and the vaccines against this disease were 05 articles. 08 articles were excluded because they focused only on the Covid-19 pandemic. Consequently, only 18 articles were included for the current study.

The same thing was observed to Ennahar concerning the raise in the number of articles published during February than March. This is due to the same reason.

3.2. 3 Persuasion strategies used in Echorouk and Ennahar newspapers

In response to the research questions of this study, it has been observed that the Algerian online newspapers namely Echourouk and Ennahar frequently employed logical, ethical and pathetic appeals, to construct its point of view about the Covid-19 vaccination. This study established that these newspapers articles produced rich persuasive discourses while covering the vaccine and vaccination . The following sections present the persuasion devices used in Echorouk and Ennahar in terms of Aristotle's logical, ethical and pathetic appeals

3.2.3.1 The use of Logos in Echourouk

As mentioned in chapter two, **Logos** as logical appeals rely on the following discursive strategies such as reasons, facts, and premises to produce an "internal consistency" so that readers can perceive a position probably and reasonably. In this light, Echourouk newspaper used the most common strategies expressing the logical appeal comprise providing factual evidence and statistics to support opinions and claims, and logical reasoning to build up a coherent argument so as to convince the audience to accept the interpretation of the information conveyed about Covid-19 vaccine. This is clearly expressed in its monthly coverage of the Covid-19 vaccine with a percentage of 47% for February coverage and 49% for March.

Several lexical items from logical appeals in Echourouk newspaper coverage of the vaccine (. For example, sentences which contain logic statements fall under Logos and are underlined below) :

- قال خبير اللقاحات والأستاذ في جامعة ميشيغان علي فطوم - في لقاء مع برنامج بلا حدود حول لقاحات كورونا- إن اللقاحات

أفضل ما أنتجه العقل الإنساني منذ أكثر من 100 سنة.

Vaccine expert and professor at the University of Michigan Ali Fatoum said - in an interview with the Without Borders Program on Corona Vaccines - that vaccines are the best that the human mind has produced more than 100 years ago.

- "فأؤكد للسائل الاطمئنان تماما، فلا يمكن التهاون **في مسألة مأمونية اللقاح أو فعاليته**.

-نحن نواجه طفرة بشرية وعلمية كبرى استطاعت أن تنجز **هذا اللقاح في فترة زمنية بسيطة**، ولكن لن يكون على حساب **فعالية ومأمونية اللقاح**" .

- "I assure the questioner of complete reassurance, and the issue of the safety or effectiveness of the vaccine cannot be compromised. We are facing a major human and scientific breakthrough that was able to achieve this vaccine in a short period of time, but it will not be at the expense of the effectiveness and safety of the vaccine.

- تُنقِذ اللقاحات ما بين 2 إلى 3 ملايين حياة سنوياً، وهي من أعظم إنجازات الطب الحديث .

Vaccines save between 2 and 3 million lives annually, which is one of the greatest achievements of modern medicine

- **إن إقناع شخص ما معارض للقاحات هو عملية طويلة.** ويقول الدكتور سعد، "الأمر صعب جداً". وتذكّرْ أنه من غير المرجّح أن الأشخاص الذين **يعارضون اللقاحات معارضة شديدة عموماً ستتغير آرائهم بعد محادثة واحدة فقط.** أما الأمر المهم فهو "المحافظة على التواصل معهم."

Convincing someone against vaccinations is a long process. "It's very difficult," says Dr. Saad. And remember, it's unlikely that people who are generally very anti-vaccine will change their minds after just one conversation. The important thing is to maintain contact with them

Echourouk used the logical appeal for a percentage of 47% for February and 49% for March , to construct convincing endorsements, build up persuasiveness, and ensure that is made receptive to opinions constructed to encourage the Covid-19 vaccine. As the findings of(Kamau & Berry, 2013) mentioned in the literature review revealed , particularly, when the newspaper is employed as a medium to deliver the message logos become "legitimating appeal" Some more logical appeals were constructed to formulate a public opinion regarding post-vaccination against Covid-19.

As refer to the literature review, a part from using the logical appeals, Echourouk explored the role and construct of rhetoric- ethos- pathos- logos- with reference to authorities to show how governments gained citizens' trust and compliance with Covid-19 lockdown measures first, and with the vaccination process later . in this context , Echourouk deployed Logos to defend government

interventions by providing reasons to believe the risks posed by the Covid-19, give instructions, and persuade citizens of the effectiveness of the suggested coping responses. As the Algerian Prime Minister stated: "It is vital to show down the spread of the disease. Because that is the way we reduce the number of people needing hospital treatment at any one time so we can protect the NHS ability to cope and save more lives…….and that is why we have been asking people to stay at home during the first phases of the pandemic and and to get vaccinated at this stage" Echourouk, March 8th, 2021)

3.2.3.3. The use of Ethos in Echourouk

With a percentage of 23% for the month of February and 25% for the month of March, **Ethos** was employed in Echourourk to convey leadership, trustworthiness, credibility, and reliability of Covid-19 government policies to encourage the vaccination. For example, the First Minister claimed; " we always acted on the basis of the evaluations provided by the technical-scientific committee, and we always followed a policy of transparence, a policy of trust….." Echourouk, February24th,2021).

Allaying with previous research mentioned while reviewing the literature, and by positioning readers as in-group members, journalists as persuaders assume shared values and goals with the

audience and satisfy the emotional needs of readers, thus achieving an ethos-pathos interface. Credibility is therefore associated with expertise and an ability to provide clear, detailed instructions, which are constructed primarily via the logical and ethical appeals. The following examples illustrate this point:

- تقول وين إن " التحدث مع الشخص عن **أهمية تلقيه اللقاح من أجل نفعه وصحته الشخصية** قد لا تكون وسيلة فعالة لإقناعه بالتطعيم، في حين أن التحدث عن **أهمية اللقاح من أجل صحة عائلته هي الوسيلة الأكثر فاعلية حتى الآن".**

Wayne says that "talking to the person about the importance of receiving the vaccine for his benefit and personal health may not be an effective way to convince him to vaccinate, while talking about the importance of the vaccine for the health of his family is the most effective way so far."

- ما أصبحنا متأكدين منه الآن هو أن **الخطر الأكبر هو عدم الحصول على اللقاح** والإصابة بفيروس كورونا

What we are now sure of is that the biggest risk is not getting vaccinated and contracting the Corona virus.

3.2.3.4.The use of Pathos in Echourouk

Pathos was used in Echourouk coverage of the Covid-19 vaccine 30% and 26% for February and March respectively. This use aimed to instill strength, courage, and determination but also hope, optimism, and togetherness. For example, the Algerian president Abdelmajid Tebboune, affirmed : " …..we are a strong country. A country that does not give up, this is in our DNA" (Echourouk, March 7th,2021). The pathetic appeal encompasses appeal to fear which is a commonly used method that attempts to change behaviors by creating anxiety in those receiving a fearful message. It is regularly used in public health initiatives such as anti-smoking, anti-drunk, anti-vaccine and so forth. The linguistic features used to persuade the population to get vaccinated emphasize the personal risks of failing to to vaccinate against Covid-19, as well as the potential collective public health consequences of low vaccine uptake, are effective at convincing Algerians to plan to vaccinate. For instance,

- وفقا لتصريحات سابقة للدكتور أمجد الخولي، استشاري الأوبئة في منظمة الصحة العالمية، في مقابلة حول **التخوف من الأعراض الجانبية لتلقي اللقاح**، قال الدكتور "في الحقيقة هذا تخوف مفهوم ومقبول، ولكن لا بد من القول إن **هذا التخوف ظهر مع كل لقاح. ولقاح كوفيد-19 ليس هو اللقاح الأول في تاريخ البشرية**، فهناك كم كبير، وعشرات اللقاحات ظهرت **وأثبتت فعاليتها بالرغم من خوف الناس** في البداية"

"According to previous statements by Dr. Amjad Al-Khouli, an epidemiologist at the World Health Organization, in an interview about the fear of the side effects of receiving the vaccine, the doctor said, "In fact, this is an understandable and acceptable fear, but it must be said that this fear appeared with every vaccine. And the Covid vaccine. -19 is not the first vaccine in human history, there is a large number, and dozens of vaccines have appeared and proven effective despite people's fear in the beginning".

1- أوصت الدكتورة لينا وين بمعالجة **مخاوف الأشخاص** بشكل فردي بدلاً من استخدام عبارات شاملة محفوظ. وقالت: "على سبيل المثال، إذا كانوا قلقين من **أن اللقاح قد يسبب العقم**، فيجب أن يركز الشخص على هذا الجانب ويستعين بالبيانات التي تفيد **بأنه آمن للحوامل على وجه التحديد".**

Dr. Lena Wayne recommended addressing people's concerns individually rather than using comprehensive hoardings.

"For example, if they are concerned that the vaccine may cause infertility, the person should focus on this aspect and draw on the data that it is specifically safe for pregnant women," she said.

The following figure summarizes the use of ethos, pathos, and logos in Echourouk newspaper

during the study period:

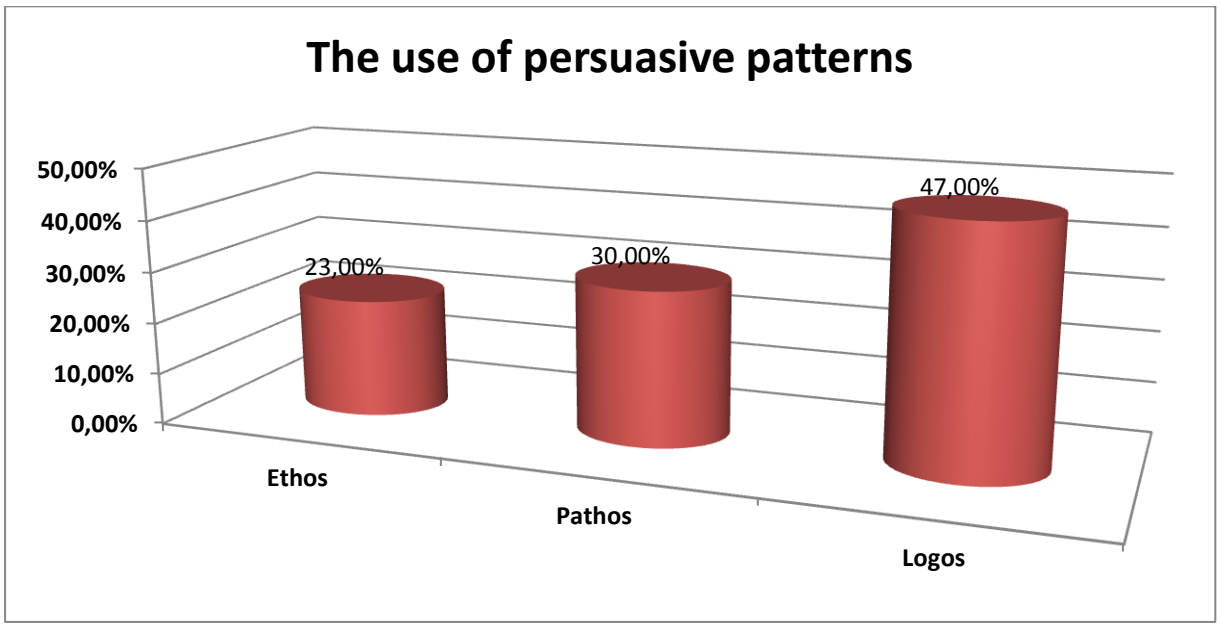

Figure 4: Types of persuasion strategies in Echourouk newspaper for February coverage

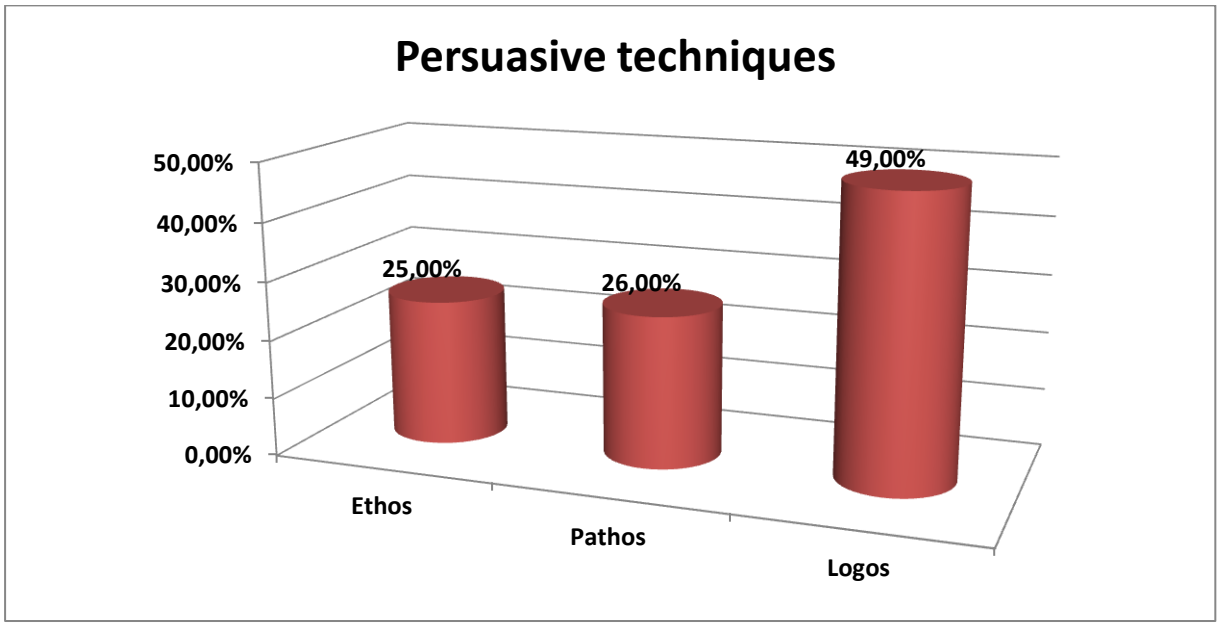

Figure 5: Types of persuasion strategies in Echourouk newspaper for March coverage

3.2.3.4. The use of Logos in Ennahar newspaper

Ennahar constantly employed the logical appeal as massively influential experience and object as well to encourage the Covid-19 vaccine among the Algerians. With a percentage of 50% for February coverage and 49% for March one, Ennahar relied on logos through the use of logic, careful structure, and objective evidence to support Covid-19 vaccine skepticism. This is worthy noted in appealing to the Algerians' intellect by appealing to information that are fact checked (using multiple sources) .For instance: " the Covid-19 vaccine protects you from the disease according to the following scientific reports", said the Algerian Prime Minister (see appendix 1, p 2).

Ennahar supported its monthly coverage of the Covid-19 vaccine by information, figures, facts, and statistics. Additionally, as mentioned in the literature review concerning the safety of the vaccine as a factor associated with vaccine hesitancy , this journalistic discourses provided a solid and non-biased explanation of the safety of the Covid-19 vaccine as a great way to invoke logos. For example: "Our citizens should believe on the safety of the Covid-19 vaccine as the following statistics explain……." claimed Abderrahman Bouzid (The Algerian Health Minister, Ennahar ; February, 21st ,2021)

اعتمادا على **صحة ما قدمناه من أدلة** ، على المواطنين **الالتفاف حول حملة التلقيح**

Finally, as the logical appeals rest on rational modes of thinking, such as comparison, Ennahar's coverage of the Covid-19 vaccination process across different regions of the country, focused on comparing mortality rates and vaccine uptake between supporters and opposants of the vaccine. Examples to illustrate this point include:" ……mortality rates are higher in most wilayas which discouraged the Covid-19 vaccine unlike those supporting it" claimed the Algerian Prime Minister

(Ennahar,March,8th, 2021)

نسبة الوفيات في الولايات التي سجلت **اقل معدلات في التلقيح** كانت أعلى منها في الولايات التي **أقبلت على عملية التلقيح**

3.2.3.5 . The use of Ethos in Ennahar newspaper

It is fair to say that, in general, Ennahar newspaper used the two facets of the ethical appeal explained in the preceded theoretical framework which are audience values and authoritical credibility character. Ethos is employed in February coverage 29% while in March coverage 26%. The use of these discursive strategies aimed to determine the journalists' expertise in the subject of vaccination against Covid-19 pandemic. First, to establish their credibility, journalists draw attention

to the scientific experiences of the interviewed with Covid-19 vaccine being discussed as an ethical appeal. For instance: " Because I have experience with Covid-19 vaccine, and I say and confirm- you should trust what I am saying about the benefits of getting vaccinated and the safety of the vaccine as well…" said Djamel Benbahmed, Algeria's Minister for the pharmaceutical industry (Ennahar, February 21st ,2021)

- انطلاقا من **تجريبتي مع لقاح كوفيد 19 أقول وأؤكد انه عليكم الثقة ايجابيات اللقاح و مأمونيته**

On the one hand and in some articles, it is noticeable that journalists did not have to establish their credibility because the audience already knows that they are credible but rather focused on the second aspect of the ethical appeal which is character. For instance: "Djarad receives the vaccine .... and the manufacture of Sputnik in Algeria" (Ennahar, March, 8th ,2021)

- **جراد يتلقى اللقاح** .... وتصنيع سبوتنيك في الجزائر

On the other hand, when Ennahar journalists employed the mentioned discursive strategies of the ethical appeal, they attempted to tap in the values ,or ideologies that the Algerian population holds. For example, self preservation is worthy supported : "We care about our health and our beloveds, so we have to preserve them through vaccination" declared the Algerian president in his television speech reported in Ennahar (see appendix 2, p 1) .

نهتم لصحتنا وصحة احبابنا لذا علينا **حمايتهم بتلقي اللقاح**

To conclude, when journalistic discourses evoke the values that the Algerian audience care about as a way to justify or support the vaccination, they make the population feels" rightness" about their arguments.

3.2.3.6. The use of Pathos in Ennahar newspaper

Ennahar used pathos 21% for February coverage of the Covid-19 and 25% for March one. This use is achieved through taping into the Algerians 'emotions to get them vaccinated. It also used the pathetic appeal to express the anger of lockdown measures, the pride of controlling the spread of the epidemic through vaccination, and more focus on happiness of returning back to normal life (life conditions before the Covid-19 outbreak) . Examples of such expressions: "I know that the majority of us feel angry about the implemented strict precautions and controls to contain the outbreak of COVID-19" declared The Minister of Health Abderrahmane Benbouzid (see appendix 2 ,p 2). He also claimed : " Those preventive measures proved insufficient to halt the spread of the disease, the only way to get back to normal life is to get vaccinated" (Ennahar, March, 24th ,2021)

Pathos-based rhetorical strategies --in Ennahar coverage of the Covid-19 vaccine during the study period- got the Algerians to " open up" to the Covid-19 vaccine through making them vulnerable via emotions. This vulnerability is employed by journalists to get the Algerians to believe that this vaccination campaign is a compelling one. The following figure maps the use of the trio ethos-pathos-logos- by Ennahar newspaper during the month of February:

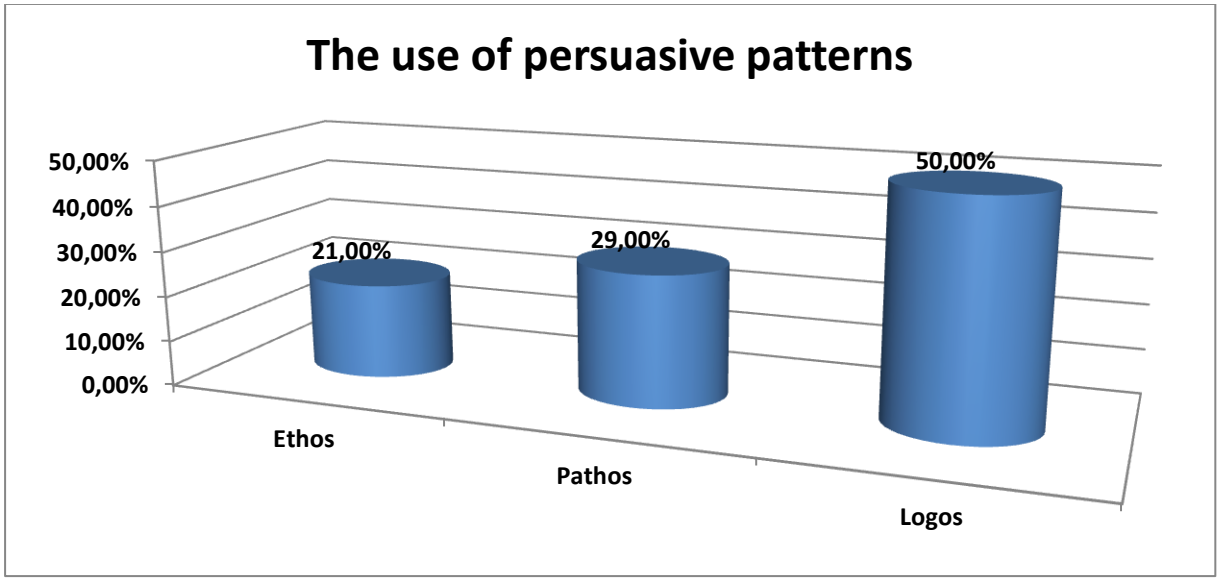

Figure 6: Types of persuasion strategies in Ennahar newspaper for February coverage

The following figure summarizes the use of the persuasion strategies in Ennahar coverage of the Covid-19 vaccine during the month of March:

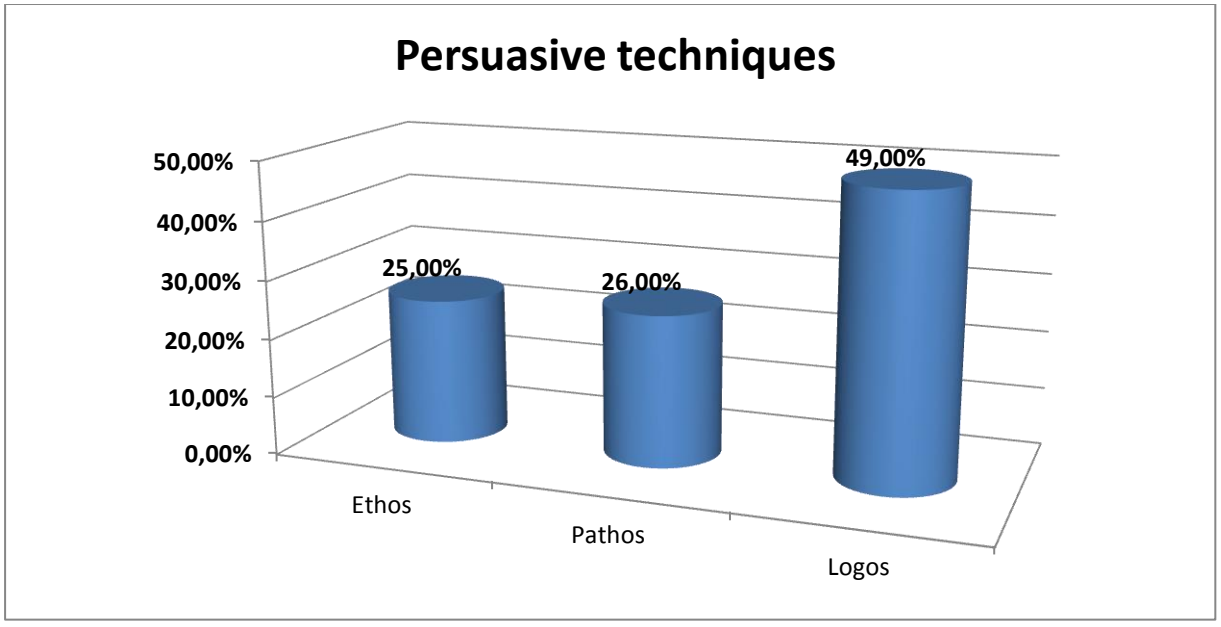

Figure 7 : **Types of persuasion strategies in Ennahar newspaper for March coverage**

3.3 Discussion

3.3.1 A comparison between persuasion strategies in Echourouk and Ennahar

From the findings of the study, the daily Echourouk mainly employed more rhetorical devices than Ennahar in covering Covid-19 vaccine. Hence, these strategies have implication how the print media reported the health crisis. In terms of how the vaccination process is reported , in most cases, there was no significant difference between the coverage of both newspapers except for the frequency of using the persuasive techniques to help build trust in the vaccine. Ennahar may have covered less persuading patterns during the study duration rather than Echourouk. However both of them produce persuasive discourse through different lexical choices that contribute to the evaluative dimension of the text and thus to the ethical, logical, and pathetic appeal to encourage the Covid-19 vaccine amongst Algerians. The following figure maps the comparison between the two selected newspapers in using Aristotle's model of persuasion to encourage the Covid-19 vaccination among the Algerians:

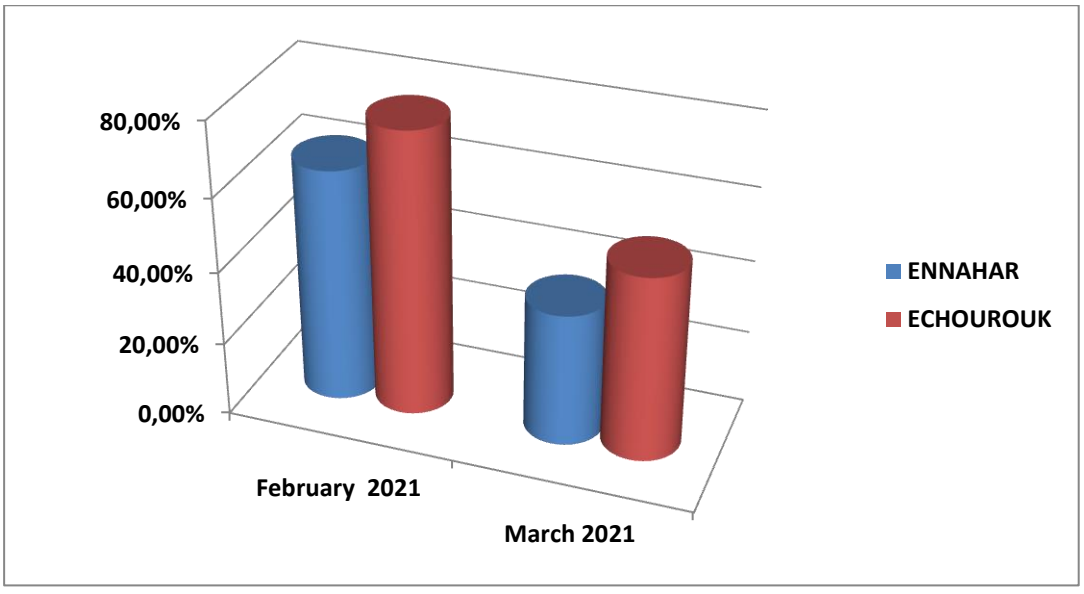

Figure 8 : The use of evaluative lexis in both Echourouk and Ennahar during the study period

The first research question of the current research has been answered as follows:

The Algerian Arabic daily online newspapers namely Echourouk and Ennahar used persuasion strategies to support Covid-19 vaccine among Algerians. So, the first hypothesis has been confirmed.

Chapter Three: Data Analysis

The importance of the combined use of the three means of persuasion in both selected newspapers as the findings of this study showed about the coverage of the Covid-19 vaccine share the same significance according to Aristotle in Charteris-Black (2005). This importance lies in the fact that, as social scientists have convincingly shown, these persuasive appeals are complementary since they activate specific sides of the listener's / raeder's mind and emotions to varying extent and this (Ilie, 2006) . When analyzing Ennahar's and Echourouk's articles , the findings highlighted its constantly employing the trio ethos-pathos-logos throughout the coverage of the Covid-19 vaccine. This communicative technique allowed these newspapers to clearly explain the need for the vaccine to stop the spread of the virus and illustrate and justify the fear strategy to raise the vaccine skepticism.

A second point worth noting regarding what the findings mean for covering the Covid-19 vaccine during that health crises by both newspapers, is that it shows the extent to which citizens trust the government and scientific experts as definers in the news on the one hand, and the degree of their trust of the media on the other hand. As mentioned in the literature review, Cairney and Wellstead (2021) expounds on this: "In a [health] crisis, almost-instant choices about who to trust or distrust could make a difference between life and death" (p. 1). More specifically, health practitioners are equipped with empirical knowledge of the preparedness of policymakers in responding the early signs of infectious diseases. This latter count for Ennahar and Echourouk interviewing authorities and celebrities namely religious figures to encourage the vaccination complain. The analysis of the religious discourse in such context (Covid-19 vaccination to end the pandemic), bears an important dimension of the interplay between the word and other semiotic modes. The most prominent persuasive appeal in religious discourse as the findings of Murthy (2014) showed in the literature review , is the pathetic appeal as it is approached as a reinforcement device instrumental in enhancing the speaker's / writer's credibility and the reliability of the messag. In other words, it is instrumental in enhancing the personal involvement of the persuader and creating a rapport with the audience based on communality and shared values, experiences and beliefs. Additionally**,** The use of hedges, boosters, and attitude markers seem to be the key persuasive resources available to journalists as they attempt to present their views and claims in a way which readers may find convincing.

A deeper understanding of persuasion should take into consideration the contribution of all semiotic modes in the process of changing or reinforcing the identity perception, behavior, beliefs, and emotional state of the persuade. This is exactly what Ennah and Echourouk bear in their

coverage of the Covid-19 vaccine with more attention paid to fear as a persuading strategy. It is clear that fear is a major driver of both COVID-19 vaccination and vaccine hesitancy. Fear of COVID-19 outbreaks such as those seen in Blida drives vaccinations up. Fear of side effects drives vaccination rates down, as when the complication of a clotting disorder with the AstraZeneca vaccine was publicized. More recently, fear of prolonged lockdowns has driven vaccinations up, most notably in Blida. Alternatively, this could be framed in terms of a positive effect of *pathos*: the hope of enjoying greater freedoms. While the findings of previous research (Murthy, 2014) focused on the ethical appeal, the logical appeal had the highest rates of use in both newspapers as the findings of the current study revealed. Other media experts suggest the campaign should appeal to *ethos*: Who do Algerians look up to and listen to? They argue it's not enough to get the science right, the message matters and so does the messenger. And they say this is a matter of building and restoring trust. Trust is the key element in persuasion using *ethos*. Lack of trust in health care systems, in pharmaceutical companies and in government, is a major factor in vaccine hesitancy and resistance globally. Conspiracy theories abound both in relation to the virus and the vaccines. Trust depends on a number of social, political, historical and religious factors, that differ in different communities.

The answer to research question number two raised in this research is as follows:

The Algerian Arabic daily online newspapers namely Echourouk and Ennahar used persuasion strategies of fear and risk perception to encourage the Algerians to get Covid-19 vaccine. So, the second hypothesis has been confirmed.

3.4 Conclusion

This chapter is devoted to the analysis of each of the data collected from the two selected newspapers, after which the researcher discusses the results and makes recommendations. As a result of the analysis, the investigator confirmed the hypothesis that suggested the Algerian online newspapers used rhetorical strategies of fear and risk to convince people to get vaccinated.

General conclusion

In 2019, COVID-19 pandemic has ravaged the world, resulting in millions of deaths. To prevent the spread of this pandemic, the governments took serious measures, such as imposing social distancing, mandatory use of face coverings, and partial or full lockdowns. Despite these measures, Covid-19 killed many people. As a result, pharmaceutical companies have developed vaccines against Covid-19 in record time and without sufficient usual testing in order to bring the devastating pandemic under control. Many governments, including Algeria, have encouraged people to get vaccinated. However, the conditions under which the vaccines were developed led to people's hesitation worldwide. One way to overcome this hesitancy has been through the use of the mass media. to persuade the Covid-19 uptake.

In this light, this study attempted to investigate the ways Ennahar and Echourouk online newspapers used persuasion as a tool to address and represent the Covid-19 vaccine issues using Aristotle's rhetorical model . This model operates through Ethos, pathos and logos .While ethos concerns the credibility of the communicator, pathos has to do with the ability to stimulate the emotions, and logos relates to logical evidence.

Using Aristotle model of persuasion, findings showed that the daily online newspapers namely Echourouk and Ennahar used logos, ethos and pathos as a mode of persuasion to mostly support the Covid-19 vaccination and remove the Algerians' skepticism. This confirms hypothesis 1 that the selected newspapers used persuasive strategies to encourage Covid-19 vaccine uptake among Algerians.

Findings also showed that both newspapers devoted more articles in February , that immediately after the introduction of the vaccine than in march , which shows the active role of the media . While the findings of Cairney and Wellstead (2021), showed that visual media discourse tend to focus on the ethical appeal, the findings of the current study revealed that newspapers focused on logical appeal , which may imply that persuasion may work differently in print media than visual one. Findings showed that both newspapers used recurring strategies to persuade people to get vaccinated through the use of the three appeals .the logical appeal was most used through factual evidence and statistics as well as logical reasoning to convince the audience to accept Covid-19 vaccination . The pathetic appeal moistly focused on creating fear for the hesitant people so that they change their attitudes and instill strength, courage, hope and for the vaccinated. This confirms hypothesis 2 that the selected newspapers used persuasion strategies of fear and risk perception to support Covid-19 vaccine .By

conceptualizing persuasion as a communicative process in which the persuader (Echourouk and Ennahar newspapers in this case) attempts to change or reinforce the identity, perception, behaviors, beliefs and emotional state of to persuade the Algerian population in a specific professional and socio-cultural context (the Covid-19 vaccine era). The current research reiterates that Echourouk and Ennahar newspaper articles play a decisive role by covering the Covid-19 vaccine in a rhetorically and persuasive manner that (may) convince the audience to favor a particular side. It also reaffirms that the newspaper articles as a dominant discourse genre invested with institutional power have presented a convening case of the vaccine through persuasive appeals.

Findings also indicated that the persuasive patterns used by Ennahar and Echourouk (through the analysis of 109 articles) media in Algeria for increasing Covid-19 vaccine uptake is still inadequate considering the hesitancy and the palpable fears among people.

Recommendations

This study used Aristotle's persuasion model to analyse the online selected newspapers coverage of Covid-19 vaccine. Other research may use different models of analysis to investigate state owned newspapers coverage

Bibliography

Abbas, Fakhruddin (2008). *The use of persuasive technique by Barack Obama in his p olitical speeches in the 2008 USA presidential primaries.* Undergraduate thesis, University Islam Negeri Maulana Malik Ibrahim.

Algerian Health Ministry, (**2021**)*https://portal.cor.europa.eu/divisionpowers/Pages/Algeria-Public-health.aspx*

Aristotle. (1981). *Rhetoric. Traduction Kukava, T. Tbilisi: TSU*

Bartsch et al., (2020); Bartsch, S. M., O'Shea, K. J., Ferguson, M. C., Bottazzi, M. E., Wedlock, P. T., Strych, U., & Lee, B. Y. (2020). *Vaccine efficacy needed for a COVID-19 coronavirus vaccine to prevent or stop an epidemic as the sole intervention. American Journal of Preventive Medicine, 59(4), 493–503.*

Bish, A. et al. (2011), "*Factors associated with uptake of vaccination against pandemic influenza: A systematic review", Vaccine, Vol. 29/38, pp. 64-72-64-84, http://dx.doi.org/10.1016/j.vaccine.2011.06.107.*

Blastland, M. et al. (2020), "*Five rules for evidence communication", Nature, Vol. 587/7834, pp. 362-364, http://dx.doi.org/10.1038/d41586-020-03189-1.*

Britton et al.,2020; Britton T., Ball F., Trapman P. (2020). A *mathematical model reveals the influence of population heterogeneity on herd immunity to SARS-CoV-2. Science 369, 846–849. doi: 10.1126/science.abc6810*

Brewer, N. and K. Fazekas (2007), "*Predictors of HPV vaccine acceptability: A theory-informed, systematic review", Preventive Medicine, Vol. 45/2-3, pp. 107-114, http://dx.doi.org/10.1016/j.ypmed.2007.05.013.*

Buller and colleagues (2019) Buller DB, Walkosz BJ, Berteletti J, Pagoto SL, Bibeau J, Baker K, et al. *Insights on HPV vaccination in the United States from mothers' comments on Facebook posts in a randomized trial. Human vaccines & immunotherapeutics. 2019;15[7–8]:1479–87. pmid:30785361*

(Callaghan et al., 2020; Callaghan, T., A., Moghtaderi, J. A., Lueck, P., Hotez, U., Strych, A., Dor, et al. (2020). *Correlates and disparities of intention to vaccinate against COVID- 19.* Soc. Sci. Med. *113638.*

Callaghan, T., Motta, M., Sylvester, S., Trujillo, K. L., and Blackburn, C. C. (2019). *Parent*

psychology and the decision to delay childhood vaccination. Soc. Sci. Med. *238, 112407. doi:10.1016/j.socscimed.2019.112407*

Centers for Disease Control and Prevention (2021), *Rapid Community Assessment Guide: Understand your community's needs regarding COVID-19 vaccines, https://www.cdc.gov/vaccines/covid-19/vaccinate-with-confidence/rca-guide/.*

***Cinelli, M. et al. (2020**), "The COVID-19 social media infodemic", Scientific Reports, Vol. 10/16598, http://dx.doi.org/doi.org/10.1038/s41598-020-73510-5.*

Chapman, G. and E. Coups (1999), "*Predictors of Influenza Vaccine Acceptance among Healthy Adults", Preventive Medicine, Vol. 29/4, pp. 249-262, http://dx.doi.org/10.1006/pmed.1999.0535.*

Vol. 10/16598, http://dx.doi.org/doi.org/10.1038/s41598-020-73510-5.

Charteris-Black (2005), *Politicians and Rhetoric: The Persuasive Power of Metaphor 2005th Edition (November 23, 2004)*

Daniel Catalan-Matamoros & Carmen Peñafiel-Saiz (2019) *A visual content analysis of vaccine coverage in the print media*

De Figueredo, A. et al. (2020), "*Mapping global trends in vaccine confidence and investigating barriers to vaccine uptake: a large-scale retrospective temporal modelling study", The Lancet, Vol. 396/10255, pp. 898-908, http://dx.doi.org/10.1016/S0140-6736(20)31558-0.*

(Diamond and Cobb (1999), *Political Campaign Communication: Inside and Out*

p 225)

ECDC (2020), *Overview of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA and the UK, https://www.ecdc.europa.eu/sites/default/files/documents/Overview-of-EU_EEA-UK-vaccination-deployment-plans.pdf.*

Echourouk *https://www.echoroukonline.com/echorouk-yawmi*

Eiser, J. et al. (2009), " *Trust me, I'm a Scientist (Not a Developer)": Perceived Expertise and Motives as Predictors of Trust in Assessment of Risk from Contaminated Land", Risk Analysis, Vol. 29/2, http://dx.doi.org/10.1111/j.1539-6924.2008.01131.x.*

EMA (2020), *COVID-19 vaccines: development, evaluation, approval and monitoring, https://www.ema.europa.eu/en/human-regulatory/overview/public-health-threats/coronavirus-disease-covid-19/treatments-vaccines/covid-19-vaccines-development-*

evaluation-approval-monitoring.

Ennahar *https://www.ennaharonline.com/newspaper/*

Evans, W. and J. French (2021), "*Demand Creation for COVID-19 Vaccination: Overcoming Vaccine Hesitancy through Social Marketing", Vaccines, Vol. 9/4, p. 319, http://dx.doi.org/10.3390/vaccines9040319.*

Gagneur, A. et al. (2018), "*Promoting Vaccination at Birth Using Motivational Interviewing Techniques Improves Vaccine Intention: The PromoVac Strategy", Journal of Infectious Diseases and Therapy, Vol. 6/5, pp. 1–7, http://dx.doi.org/10.4172/2332-0877.1000379.*

(J Gen Intern Med. 2020). *General – Journal of Internal Medicine is a peer-reviewed scientific journal that publishes original clinical work from bench to bedside covering a broad field of its subspecialties. JIM features original articles, reviews and clinical updates.*
2020 Journal Citation Reports (Clarivate Analytics): 12/169 (Medicine, General & Internal)
Online ISSN:1365-2796

Halabi, S., A. Heinrich and S. Omer (2020), "*No-Fault Compensation for Vaccine Injury The Other Side of Equitable Access to Covid-19 Vaccines", New England Journal of Medicine, Vol. 383/23, p. e125, http://dx.doi.org/10.1056/nejmp2030600.*

Hari Kusmanto, Harun Joko Prayitno, Isnaeni Sofiana, Norliza Jamaluddin (2021) ,*Persuasion Action Strategies in Da'wah Discourse on Social Media in the Global Communication Era*

Ipsos (2021), *Global Attitudes on a COVID-19 Vaccine: Ipsos survey for* The WorldEconomicForum, *https://www.ipsos.com/sites/default/files/ct/news/documents/2021-03/global-attitudes-on-a-covid-19-vaccine-march-2021-report_.pdf*

Jeffrey V Lazarus , Scott C Ratzan , Adam Palayew , Lawrence O Gostin , Heidi J Larson , Kenneth Rabin , Spencer Kimball , Ayman El-Mohandes 2020 Oct 20 *' A global survey of potential acceptance of a COVID-19 vaccine' Nat Med. 2021 Feb. 2021 Feb;27(2):225-228. doi: 10.1038/s41591-020-1124-9.*

Junk, W. et al. (2020), *Interest Representation during the Corona Virus Crisis: Results from the European Union and Nine European Countries. Summary Report, University of Copenhagen, University of Amsterdam, Trinity College Amsterdam, https://61b80c4f-58c1-4b9d-bce6-c58106af2ef4.filesusr.com/ugd/9a0cb4_dda8dac6e4e04e7fa88d30caab8b95a3.pdf (accessed on 21 December 2020).*

Kantar (2021), *COVID-19 vaccine faces an increasingly hesitant public, https://www.kantar.com/inspiration/coronavirus/covid-19-vaccine-faces-an-increasingly-hesitant-public.*

Kwok, I., E. Becht, Y. Xia, M. Ng, Y.C. Teh, L. Tan, M. Evrard, J.L.Y. Li, H.T.N. Tran, Y. Tan, et al. (2020). *Combinatorial single-cell analyses of granulocyte-monocyte progenitor heterogeneity reveals an early unipotent neutrophil progenitor. Immunity. 53:303–318.e5.*

(Laing, 2011 Hoffman and Justicz, (2016) . Hoffman SJ, Justicz V (2016) *Automatically quantifying the scientific quality and sensationalism of news records mentioning pandemics: validating a maximum entropy machine-learning model. J Clin Epidemiol 75:47–55. https://*

doi.org/10.1016/j.jclinepi.2015.12.010

Laing (2011) and Rosella et al (2013) Laing A (2011) *The H1N1 crisis: roles played by government communicators, the*
public and the media. J Prof Commun 1:123–149. https://doi.org/10.15173/
jpc.v1i1.88

Mac Donald N.E., Eskola J.et al (2020) *Vaccine hesitancy: Definition, scope and determinants*

Mohammad B. Nusair, Rasha Arabyat, et al (2022*):* *Assessment of the relationship between COVID-19 risk perception and vaccine acceptance: a cross-sectional study in Jordan (2020)*

Community pharmacists' willingness and barriers to provide vaccination during COVID-19 pandemic in Jordan

Mohan, G. and Sivakumaran, B. and Sharma, P. (2013). *Impact of Store Environment on Impulse Buying Behavior. European Journal of Marketing. 47 (10): pp. 1711-1732.*

Mondal, A. (2021), *"The importance of community engagement on COVID-19 vaccination strategy: Lessons from two California pilot programs", EClinicalMedicine, Vol. 32, p. 100754, http://dx.doi.org/10.1016/j.eclinm.2021.100754.*

Murphy, J. et al. (2021), *"Psychological characteristics associated with COVID-19 vaccine hesitancy and resistance in Ireland and the United Kingdom", Nature Communications, Vol. 12/29, pp. 12-29, http://dx.doi.org/10.1038/s41467-020-20226-9.*

Murthy, S., Bali, G. and Sarangi, S.K. (2014*)* *Effect of Lead on Growth, Protein and Biosorption Capacity of Bacillus cereus Isolated from Industrial Effluent. Journal of Environmental Biology, 35, 407-411.*

Nabila Elyazale , *Characteristics of Newspaper Editorials: 'Chouftchouf' in 'Almassae' Moroccan Newspaper as a Case Study University* Moulay Sliman, Faculty *Letters and Humanities, Avenu Ibn Khaldoun, B.P: 524 Beni Mellal, Morocco*

National Academies of Sciences, Engineering, and Medicine (2020), Framework for Equitable Allocation of COVID-19 Vaccine, The National Academies Press, https://doi.org/10.17226/25917.

***Nicolai J. Foss* (1996)**, *More Critical Comments on Knowledge-Based Theories of the Firm*

P,ublished Online:1 Oct 1996https://doi.org/10.1287/orsc.7.5.519

Noor Hanim Rahmat 2021, *A rhetorical analysis of news article on work from home European Journal of Applied Linguistics Studies*

] OECD (2021), *"Access to COVID-19 vaccines: Global approaches in a global crisis", OECD Policy Responses to Corona virus (COVID-19), OECD Publishing, Paris, https://doi.org/10.1787/c6a18370-en.*

OECD (2020), *"Building resilience to the Covid-19 pandemic: the role of centres of government", OECD Policy Responses to Coronavirus (COVID-19), OECD Publishing, Paris, https://doi.org/10.1787/883d2961-en.*

OECD (2020), *"COVID-19: Protecting people and societies", OECD Policy Responses to Coronavirus (COVID-19), OECD Publishing, Paris,https://doi.org/10.1787/e5c9de1a-en*

OECD (2020), "*Transparency, communication and trust: The role of public communication in responding to the wave of disinformation about the new coronavirus", OECD Policy Responses to Coronavirus (COVID-19), OECD Publishing, Paris, https://doi.org/10.1787/bef7ad6e-en.*

Olapegba, P. O., Ayandele, O., Kolawole, S. O., Oguntayo, R., Gandi, J. C., Dangiwa, A. L., … Iorfa, S. K. (2020, April 12*). COVID-19 Knowledge and Perceptions in Nigeria. https://doi.org/10.31234/osf.io/j356x*

Paul Cairney & Adam Wellstead (2021*) COVID-19: effective policymaking depends on trust in experts, politicians, and the public, Policy Design and Practice, 4:1, 1-14, DOI: 10.1080/25741292.2020.1837466*

Reiter, P., M. Pennell and M. Katz (2020), *"Acceptability of a COVID-19 vaccine among adults in the United States: How many people would get vaccinated?", Vaccine, Vol. 38/42, pp. 6500-6507, http://dx.doi.org/10.1016/j.vaccine.2020.08.043.*

Robertson, E. (2021), *"Predictors of COVID-19 vaccine hesitancy in the UK Household Longitudinal Study", Brain, Behavior, and Immunity, Vol. 94/May 2021, pp. 41-50, http://dx.doi.org/10.1016/j.bbi.2021.03.008.*

Rosella LC, Wilson K, Crowcroft NS et al. (2013) *Pandemic H1N1 in Canada and*

the use of evidence in developing public health policies–A policy analysis. Soc Sci Med 83:1–9. https://doi.org/10.1016/j.socscimed.2013.02.009

Shahnaz, A. M. B. R. E. E. N., & Imtiaz, A. K. I. F. A. (2014). *How a text binds together: discourse analysis of a newspaper article. International Journal of English and Education, 3(1), 238-249.*

Sari, R, H, 2012, *Persuasion strategies used by Prophet Muhamed in His Sermon. Unpublished Thesis. Malang: UIN Maulana Malik Ibrahim Malang*

Stecula, D., O. Kuru and K. Jamieson (2020*), "How Trust in Experts and Media Use Affect Acceptance of Common Anti-Vaccination Claims", The Harvard Kennedy School Misinformation Review, Vol. 1/1, http://dx.doi.org/10.37016/mr-2020-007.*

Taimoor Hussain et al. Cureus. 2021 *A Complicated Case of COVID-19-Induced Inferolateral Wall Myocardial Infarction Successfully Treated With Streptokinase . 2021 Dec 11;13(12):e20348. doi: 10.7759/cureus.20348. eCollection 2021 Dec.*

Tamar Mshvenieradze , *Logos Ethos and Pathos in Political Discourse, Theory and Practice in Language Studies, volume={3},pages={1939-1945}*

Thigpen and Funk,(2020), *Thigpen CL, Funk C. Pew Research Center Fact Tank. 2020. [September 22, 2020]. Most Americans expect a COVID-19 vaccine within a year; 72% say they would get vaccinated*

Walid Al-Qerem & Tareq L. Mukattash (2022)

Williams et al.,(2020) ,*The effects of social distancing and self-isolation during the COVID-19pandemic on adults diagnosed with asthma: A qualitative study First Published https://doi.org/10.1177/13591053211012766*

(WHO World Health Organization, 2020). WHO (2020*), Novel Corona virus(2019-nCoV) Situation Report - 13, https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200202-sitrep-13-ncov-v3.pdf*

Appendix one: Echourouk sample

جريدة الشروق شهر فيفرى 2021

بتاريخ : 2021/02/01

جراد يكسر عقدة الخوف و مسنون في الصفوف الأولى.

فورار : أطراف تروج للأكاذيب ..... ولا تردي نجاح عملية التلقيح.

يوسفي : على المواطنين الثقة في السلطات و الصبر على الوقاية

أحسن شماش أول صحفي يتلقى لقاح "سبوتنيك".

جزائريون يتذكرون لقاح بوناطيرو.

الطارف مستعدة للتلقيح

وزارة الصحة في مواجهة الإشاعات المضادة للتلقيح.

بعد 24 ساعة من تلقيحها .....أول جزائرية ملقحة تتحدث عن الأعراض.

فقط.%جرعة سبوتنيك الأولى ..... تحمي بنسبة 50

نسور الشركة بين السماء و الأرض لمواجهة كرونا

هكذا يتم تحضير المواطنين لتلقي اللقاح.

مدير الصحة بورقلة: شرعنا في تلقيح أطقمنا الطبية و الأدرع الأمامية لمواجهة كورونا.

بتاريخ : 2021/02/02

ولاية تتسلم حصصها من لقاح سبوتنيك.

هم يخترعون ونحن نقتني.

جوازات سفر خاصة بكرونا.

.%كورونا ترفع ملفات طالبي فقة رمضان بالعاصمة بـ : 50

قافلة طبية تزور المناطق النائية بالروراوة بالبويرة.

مدير الصحة يتلقى أول لقاح سبوتنيك.

انطلاق حملة التلقيح ضد كرونا من مستشفى تقزايت يتبازة

بتاريخ : 2021/02/03

5 اشهر لانتاج سبوتنيك الروسي في الجزائر.

بن با أحمد : 4 مراحل لانتاج اللقاح.... وقادرون على التصدير.

صيدال وشركات خاصة ذات خبرة ستتكفل بعمليات الانتاج.

الفضوليون اكثر من طالبي اللقاح

مستغانم تستقبل 575 جرعة من لقاح سبوتنيك.

بتاريخ : 2021/02/04

بعد مباشرة اللتلقيح ، تراجع كوفيد بالمدارس.

هذه هي تحديات تصنيع اللقاح الروسي بالجزائر.

كرونا تأجل العديد من القضايا.

الحواسيب وقطاع غيارها ممنوعة على المواطنين بسبب تداعيات كرونا.

انطلاق عمليات التلقيح ضد فيروس كوفيد 19 بولاية تيبسة.

انطلاق عمليات التلقيح ضد فيروس كوفيد 19 بولاية جيجل.

المؤسسات التربيوية بتيزي وزو تتدعم بلوازم للوقاية من كرونا.

بتاريخ : 2021/02/06

كرونا تعيق قطاع التربية و تؤجل 21 عملية بيداغوجية.

الجزائر قادرة على انتاج لقاح سبوتنيك في شهرين.

اطباء ومختصون يطمئنون بان التلقيح لا يشكل اخطار على صحة مستعمليه.

وال الولاية اول مستفيد من تلقي اللقاح.

.....545 جرعة سبوتنيك في حملة التلقيح ضد كورونا في البويرة.

انطلاق عملية التلقيح ضد فيروس كورونا ببجاية.

بتاريخ : 2021/02/07

كورونا يضرب عضو اللجنة الطبية بالإتحاد الإفريقي "يسين زرقيني".

الجزائر تؤكد على التضامن الافريقي و العالمي لمواجهة كورونا بعدما واجهة الوباء منذ الوهلة الاولى.

التسجيل لعملية الحملة التلقيح ضد كورونا متواصل.

انطلاق عملية التلقيح ضد فيروس كوفيد 19 بعيادة سطوالي بتيمزشنت.

انطلاق عملية التلقيح ضد فيروس كوفيد بولاية سطيف.

قاعة حفلات تخرق إجراءات الحجر الصحي بوهران.

الاعتداء على الاطفال في ضل كورونا.

بتاريخ : 2021/02/08

اللقاح الأمريكي خطر.

استلام 5 ملايين جرعة من اللقاح نهاية فيفري .

28 ولاية تستفيد من لقاح استرا زنيكا.

بتاريخ : 2021/02/09

استلام 900 جرعة لقاح كرونا بميلة.

انطلاق عملية التلقيح ضد كورونا بالوادي.

545 جرعة كورونا لقاح كورونا ضمن الحصة الأولي لولاية البويرة.

الهلال الحمر يحضر لتلقيح اللاجئين والمحتاجين.

بتاريخ : 2021/02/10

بناء موضعات البكالوريا في زمن كورونا.

الاتحاد الأوربي و مكافحة فيروس كورونا.

بعد وصول اللقاح البريطاني الى خنشلة تخصيص 12 مركزا متنقلا لعملية التلقيح.

انطلاق التلقيح ضد كورونا لسعيدة وتيارت وغليزان.

فتح 55 مركزا لتلقيح ضد فيروس كورونا بتيسمسيلت.

كوابيس الفاكسن .

بتاريخ : 2021/02/11

690 مليار دعم من الإتحاد الأوربي للجزائر لمواجهة كورونا.

الشروع في التلقيح ضد فيروس كورونا بالطارف.

بتاريخ : 2021/02/12

بروتوكول كورونا يؤجل مسابقات الدكتورا.

تداعيات كورونا بالجزائر .

اقتناء 40 مليون جرعة لقاح ضد كورونا.

انطلاق حملة التلقيح ضد كرونا بغرداية.

بتاريخ : 2021/02/14

انتاج سبوتنيك بالجزائر حصريا من قبل صيدال

انطلاق اولى عمليات التلقيح المضاد لكرونا بإليزي.

بتاريخ : 2021/02/15

جزائريون يتهافتون على تلقيح ضد كورونا.

جزائريون يتمردون على إجراءات الوقاية من كورونا.

بتاريخ : 2021/02/16

التداعيات الاجتماعية لكورونا في ملتقى جامعي .

مخابر ماقفارم بالجزائر تعلن عن منتوج جديد للوقاية من كورونا.

بتاريخ : 2021/02/17

تكريم أصحاب مبادرة حقائق التنفس.

الجزائر آمنة نصف احتياجاتها من اللقاح.

الوزراء يتلقونا اللقاح وعلى الجزائريين الإقبال عليه.

انطلاق عملية تلقيح المواطنين من الوباء بأدرار.

545 جرعة لقاح سبوتنيك إضافية تستفيد منها البويرة.

بتاريخ : 2021/02/18

كورونا ينعش نشاط تهريب السجائر.

6 ملفات تربوية تعود إلى الواجهة مع تراجع كورونا.

بتاريخ :20 /2021/02

فتح الرحلات الدولية مستبعد حاليا بسبب كورونا.

منحة كورونا تدفع نقابة شبه الطبيين للاحتجاج بالبويرة.

استلام ثاني جرعة وباء كورونا بالبويرة.

بتاريخ : 2021/02/21

جمعية العلماء تستقبل 5 ألاف حقيبة تنفي.

جزائريون مقتنعون بنهاية كورونا والكمامة صارت استثناء.

الشروع بتلقيح نزلاء دار المسنين بتيارت.

الدروس الخصوصية في عز الجائحة

الحديث عن اللقاحات في اللغة العربية.

بتاريخ : 2021/02/22

أين هي لقاحات الرضع في ضل كورونا ؟.

السلطات ساهمة بقوة في عملية 5 ألاف حقيبة تنفس.

وزيرة اسرائلية سابقة تمنع اللقاح عن غزة.

رئيس دولة لا يعترف بكورونا.

مستخدمو الصحة في السجون يطالبون بالتلقيح .

بتاريخ : 2021/02/23

يوم تحسيسي استباقي حول لقاح كورونا بعين صالح .

بتاريخ : 2021/02/24

مخطط استثنائي للوقاية من كورونا في صلاة التراوح.

كورونا فلعت بأمريكا أكثر من حروب.

الجزائر تغلق حدودها إستثناء مع تونس.

860 جرعة لقاح ضد كورونا بولاية ام البواقي

عمال قطاع الصحة ببجاية يطالبون بمنحة كورونا.

جزائريون يتلقونا الجرعة الثانية من لقاح كورونا ... اكدو عدم تعرضهم لمضاعفات جانبية.

بتاريخ : 2021/02/25

أوربا تتعافى من كورونا.

عازمون على التكفل ببقايا كورونا.

انطلاق عملية التلقيح بتيازة.

عملية التلقيح تشهد إقبالا كبيرا.

الكيان الصهيوني يبتز العالم بلقاح كورونا.

بلديات تفضل فرض الحجر الطوعي بسبب الوباء.

بتاريخ : 2021/02/27

السلالة البريطانية لكورونا دخلة الجزائر وسيتم توفير اللقاح المناسب لها.

السلالة البريطانية تثير الرعب بين الجزائرين .

جريدة الشروق : شهر مارس2021

بتاريخ : 2021/03/01

كورونا استنزفت عشر المياه

لا وجود لحالات عدوى بفيروس كورونا البريطانية.

لا انتشار لفيروس كورونا المتحور في الجزائر.

بتاريخ : 2021/03/02

صناديق الضمان الاجتماعي تشرع في صب إعانات فحوصات كورونا.

اختبارات بدون كوفيد.

البيروقراطية وكورونا أثرتا على الاستثمار المحلي بشلف.

بتاريخ : 2021/03/03

لا أحال رسمية لإنتاج لقاح سبوتنيك في الجزائر.

تلقيح مسني دار العجزة ضد فيروس كوفيد 19 بالطارف.

بتاريخ : 2021/03/06

كورونا تستعجل التحضير للدخول المدرسي

كورونا وصلاة التراويح.

تلاعب في تحاليل الكشف عن كورونا لدخول الجزائر.

إصابة بفيروس كورونا بمستشفى الزهراوي بالمسيلة.

بتاريخ : 2021/03/07

ارتفاع عدد المصابين بكورونا المتحورة الجزائر.

هذا ما فعلته الجائحة بأسواق السيارات في الجزائر.

مواطنون ..... تحذيرات من تراجع تطبيق إجراءات الوقاية

بتاريخ : 2021/03/08

تعويضات الأئمة عن كورونا

الشرطة في الصفوف الأولى لمكافحة وباء كورونا

بتاريخ : 2021/03/09

تكريم شهيدة كورونا بجيجل

إصابة بشار الأسد و زوجته بكورونا.

استنفاذ الجرعات المستوردة باستثناء عينة اللقاح

16 ألف مواطن فقط مسجل .

الجزائري هو الوحيد عالميا الذي يشكك في فعالية المضاد.

عدم الوقاية قد يؤدي إلى ظهور سلالات جديدة

كورونا 148 إصابة جديدة.

مواطنون يحرمون من الجرعة الثانية للقاح كورونا بعين الدفلى

بتاريخ : 2021/03/10

بسبب ارتفاع الحرارة وتناقص كورونا

أصحاب المركبات يطالبون بتحقيق إجراءات الكمامة

بتاريخ : 2021/03/11

كورونا تقترب من 3 ملايين قتيل.

المدارس تهزم كورونا بعد 100 يوم دراسة.

بتاريخ : 2021/03/13

كورونا تجمد التوظيف

جدل حول صيام ضحايا كورونا.

السلالات المتحورة لكورونا تزحف على الجزائر.

اللقاحات المطورة والمعتمدة في مختلف الحالات صالحة لجميع السلالات

ندرة لقاح الأطفال.

بتاريخ : 2021/03/14

كورونا ..... 3 وافيات و 135 إصابة جديدة

كورونا تسببت في تسريح مئات العمال ببلعباس.

بتاريخ : 2021/03/15

لجان تحقيق في البنوك للتحري في قروض كورونا

سبب تفشي وباء كورونا.

هذا ما فعلته كورونا ببعض الجزائريين في بداية الجائحة.

بتاريخ : 2021/03/16

لقاح كورونا أحدث أعراضا جاذبية لدى 300 جزائري

بتاريخ : 2021/03/17 //

بتاريخ : 2021/03/18 //

بتاريخ : 2021/03/20

لا حج بدون جرعتين من لقاح كورونا

بتاريخ : 2021/03/21

كورونا .....عدد الإصابات دون 100

تعليق لقاح " استرزينيكا" في أوروبا يثير مخاوف الجزائريين

بتاريخ : 2021/03/22

تعويضات الأئمة عن كورونا.

الجزائريون متفائلون بنهاية الوباء برفع "صفر" قبل العيد

معرض الكتاب يهزم كورونا و الفايسبوك يروج للكتاب.

بتاريخ : 2021/03/23

كورونا سبب ظلم الشجرة.

هذا هو حال زامبيا مع فيروس كورونا.

حرب لقاح في أوروبا

تسجيل 21 حالة جديدة لفيروس كورونا المتحور.

ولاية الطارف صفر حالة إصابة كورونا.

أمن جيجل يباشر عمليات التلقيح ضد كورونا.

معركة الوباء و حرب اللقاح

بتاريخ : 2021/03/24

اللقاح و الجزائريين مع الحج.

كورونا تتجاوز عتبة 123 مليون إصابة

حرب لقاح في أوروبا

تسجيل 21 حالة جديدة لفيروس كورونا المتحور.

صفر حالة إصابة كورونا..... ولاية الطارف

أمن جيجل يباشر عمليات التلقيح ضد كورونا.

معركة الوباء و حرب اللقاح.

بتاريخ : 2021/03/25

حملة لتحسيس التجار بجرعات الوقاية من كورونا.

ألف مصاب بالسل بالجزائر .... وكورونا عدوهم الأول.

الطب التكميلي في مواجهة تحديات الآفات الجديدة كوفيد 19

بتاريخ : 2021/03/27

كورونا أصابت أكثر من 20 مليون جزائري بدون أعراض.

استلام 384 جرعة لقاح "سينوفارم" المضاد لفيروس كورونا بإليزي.

بتاريخ : 2021/03/28

جراد ... الجزائر لم تربح بعد المعركة ضد كورونا

كورونا تفرمل الهجرة السرية بتموشنت

كشوف كورونا في المخابر الخاصة

بتاريخ : 2021/03/29

كورونا أفلست المنتجين

قوائم المحتاجين وفق المتضررين.

بتاريخ : 2021/03/30

تخفيف تدابير الحجر المنزلي و حصره في 9 ولايات

دواء حيوانات يروج للعلاج من كورونا

بعد احتلالها المرتبة الأولى وطنيا في السلالة المتحورة... العودة إلى نقطة الصفر لمجابهة فيروس كورونا.

Appendix two: Ennahar sample

جريدة النهار : شهر فيفري2021

بتاريخ : 2021/02/01

جراد يتلقى اللقاح .... وتصنيع سبوتنيك في الجزائر

لقاح كورونا التي طلبناها كافية لتلقيح كل الجزائريين الوزير الأول : كميات

توزيع اللقاح سيكون بالتساوي بين جميع الولايات

وزارة الصحة تدعو إلى التفاعل الايجابي مع حملة التلقيح

بتاريخ :2021/02/02

ثاني لقاح مضاد لكورونا يصل الجزائر "استرازينيكا"

الدفعة الثانية من اللقاح المضاد لكورونا

بتاريخ : 2021/02/03

بإمكانيات إنتاج لقاح كورونا في الجزائر خلال شهرين ان توفرت المادة الأولية

انطلاق عملية التلقيح ضد كورونا بعد تسلم أولى الشحنات في سطيف وتبسة.

بتاريخ : 2021/02/04

إنتاج لقاح سبوتنيك يتطلب مخابر خاصة من المقياس الرابع

تخصيص 52 مركزا لأكثر من نصف مليون مواطن معني باللقاح في البرج

بتاريخ : 2021/02/06

أهم التحضيرات الخاصة بالإنتاج اللقاح محليا .

النهار في قلب مخابر "فراتر رازرس.

بتاريخ : 2021/02/07 //

بتاريخ : 2021/02/08

20 ولاية استفادت من الدفعة الأولى للقاح كورونا .

40 مليون جرعة من لقاح كورونا في الجزائر قبل نهاية السنة .

تسجيل أكثر من 36 مخالفة لإجراءات الحجر والوقاية من كورونا

بتاريخ : 2021/02/09

تخصيص معقمات وأجهزة حرارة

بتاريخ : 2021/02/10

انطلاق عملية التلقيح ضد كرونا في برج بوعريريج في ميلة.

بتاريخ : 2021/02/11

انطلاق حملة التلقيح ضد كورونا الأسبوع المقبل في ادرار

610 جرعة لقاح ضد كرونا كأول دفعة والجيش الأبيض أول الملقحين بغليزان

إسلام 650 جرعة لقاح كورونا وانطلاق عملية التلقيح في قالمة

بتاريخ : 2021/02/13

الكيف من نوع كوفيد 19

اقتناء 40 مليون جرعة لقاح كورونا لتلقيح 20 مليون جزائري خلال 2021

غلق مسجد بلال ابن رباح بالواد يبعد تسجيل حالتي وفاة كورونا

بتاريخ : 2021/02/14

صيدال لإنتاج لقاح "سبوتنيك"ضد كورونا بالشراكة مع الروس.

انطلاق عملية التلقيح ضد كورونا وسط تساؤلات عن شح الكمية في إليزي.

بتاريخ : 2021/02/15

انطلاق حملت التلقيح ضد كورونا في مناطق الظل بقالمة

بتاريخ : 2021/02/16

انطلاق عملية التلقيح ضد كورونا في ادرار

بتاريخ : 2021/02/17

تصنيع اللقاح ضد كورونا في الجزائر بعد 6 أشهر (جرعة واحدة للمصاب).

بتاريخ : 2021/02/18

مسابقة التوظيف تتسبب في انتشار وباء كوفيد 19 بالوادي.

بتاريخ : 2021/02/21

وباء كورونا يتسبب في أزمة دم في المستشفيات .

164 إصابة جديدة بفيروس كورونا و 143 حالة شفاء و 4 وفيات

الشروع في المرحلة الثانية من التلقيح ضد كورونا في عنابة.

بتاريخ : 2021/02/22 //

بتاريخ : 2021/02/23 //

بتاريخ : 2021/02/24 //

بتاريخ : 2021/02/25

وزارة الصحة تستلم 5200 حقيبة طبية من جمعية علماء المسلمين .

حافلات نقل خطر انتقل لكورونا بوهران

بتاريخ : 2021/02/27

كورونا البريطانية تدخل الجزائر.

جريدة النهار : شهر مارس2021

بتاريخ : 2021/03/01 //

بتاريخ : 2021/03/02

تمديد إجراءات الحجر الصحي لمدة 15 يوما.

عمال مستشفى يحتجون بسبب منحة كورونا.

بتاريخ : 2021/03/04

861 إجلاء صحي لحالات إصابة بفيروس كورونا.

بتاريخ : 2021/03/06

تسجيل 4 حالات إصابة جديدي بفيروس كورونا المتحور.

كورونا لم يكشف جميع أسراره و من المتوقع ظهور حالات أخرى للسلالة الجديدة

مزور لدخول PCRإحصائيات كورونا من صلاحيات معهد باستور ...متحايلون يلجئون إلى استخدام تحاليل الجزائر

بتاريخ : 2021/03/07

كورونا أثرت على التكفل بمرضى السرطان

تسجيل 8 إصابات مؤكدة بسلالة كورونا البريطانية

بتاريخ : 2021/03/08 //

بتاريخ : 2021/03/09

منهم فاقت أعمارهم 50 سنة (نفاذ كلي %حوالي 16 ألف مواطن سجلوا في الأرضية الرقمية لتلقي اللقاح 73 لحصة اللقاح الروسي)

تلقيح 300 شخص ضد كورونا في برج بوعريريج.

بتاريخ : 2021/03/10 //

بتاريخ : 2021/03/11 //

بتاريخ : 2021/03/13

تسجيل 20 حالة جديدة من سلالات كورونا الجديد

12 من طاقم مستشفى "مصطفى باشا"%تلقيح

بتاريخ : 2021/03/14

تسجيل 60 حالة جديدة مؤكدة بوباء كورونا خلال شهر مارس في الوادي .

بتاريخ : 2021/03/15 //

بتاريخ : 2021/03/16 //

بتاريخ : 2021/03/17 //

130 إصابة جديدة بفيروس كورونا

بتاريخ : 2021/03/18

كناص عنابة يسجل 148 طلب التعويضات تحاليل الكشف عن كورونا

بتاريخ : 2021/03/20 //

بتاريخ : 2021/03/21 //

بتاريخ : 2021/03/23 //

بتاريخ : 2021/03/24

تسجيل 21 حالة جديدة بالسلالة المتحورة لفيروس كورونا.

بتاريخ : 2021/03/25 //

بتاريخ : 2021/03/27

من الجزائريين أصيبوا بكورونا دون أعراض%وصلنا إلى مناعة القاطع وأكثر من 50

بتاريخ :2021/03/28

40 ألف جزائر تم انجلاؤهم من الخارج منذ تفشي كورونا

بتاريخ :2021/03/29 //

بتاريخ : 2021/03/30 //

بتاريخ : 2021/03/31

وزارة الصحة تحذر من استعمال دواء إيفرامكتين لعلاج كورونا