

# A CASE STUDY OF THE “SAN GIOVANNI DI DIO E RUGGI D’ARAGONA” AOU ON ACCEPTANCE OR HESITANCY TO THE COVID-19 VACCINATION CAMPAIGN, AFTER THE INTRODUCTION OF THE GREEN DIGITAL PASS

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**Abstract:** *We aim to articulate the relationships between people's behavior and their vaccination representations according to social characteristics and the role of social media. We conducted our research using questionnaires and content analysis of magazines. Our work underscores how the interconnection among representations, people, experience, doubts about science, and many reiterated ambivalent messages of the media, trigger contradictory positions in most cases. Compared to this, a sociological approach may be useful for identifying the social conditions under which skeptical attitudes towards vaccinations emerge.*

**Key words:** *Sars-Cov2, misinformation, social communication, vaccine, Italy.*

## 1. Introduction

Vaccination is widely considered one of the greatest medical achievements of modern civilization. Childhood diseases that were commonplace less than a generation ago are now increasingly rare because of vaccines (Chatterjee, 2013). However, critics and controversies have existed and have increased due to several reasons, including the rapid growth of social media, with the consequence of widespread dissemination of concerns, misconception and also the medical misinformation that is spreading at a spectacular rate (Kouzy et al., 2020). At the beginning of 2020 some researchers at the Annenberg Public Policy Centre of the University of Pennsylvania showed that people who rely on social media for information were more likely to be misinformed about vaccines than those who rely on traditional media and the researchers also found that

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an individual's level of trust in medical experts affects the likelihood that a person's beliefs about vaccination will change. Low levels of trust in medical experts coincide with believing vaccine misinformation (Stecula, Kuru, Jamieson, 2020). In the traditional mass media there are always people who had expertise and journalists as critical gatekeepers who were able to filter some of this information. The COVID-19 vaccination campaign and the subsequent achievement of adequate vaccination coverage represent the only winning formulas for overcoming the health, economic, and social difficulties brought about by the pandemic, which, since 2019, has gripped countries all over the world. However, there is still resistance to the administration of currently available vaccines for the prevention of SARS-CoV-2 infections, and it is evident that, even in a small group of the population, such resistance could undermine the return to normality (Wilf-Miron et al. 2021). Not surprisingly, the World Health Organization has identified vaccine hesitancy, that is, the tendency to delay or refuse a vaccine, as the third greatest threat to global health (World Health Organization, 2020). These fears are also present in healthcare workers (Karafillakis et al., 2017; Kwok et al., 2021) and school workers.

We tried consideration needs to be given to vaccination/antivaccination positions (Attwell, Meyer & Ward, 2018; Johnson, N.F., Velásquez, N., Restrepo, N.J. et al. 2020). For this reason, we used the social construction approach to the information to understand the ways of the knowledge about vaccination or no vaccination of their self. This theoretical approach to and the vaccinations issues, we expect that people facing vaccination fears, myths, risks, and the conspiracy will organize themselves in a coherent field, where specific variables are active: hesitancy about the intention to complete immunization schedules; personal experience of adverse reactions; rumors regarding other people's adverse reactions; different sources of everyday information, and general values as the claims for free choice; doubts on science and universalistic positions about the just world.

This connection is even more important in the Sars-Cov2 era where pharmacists (individuals) and pharmacies (shops) are still the main reference point for those patients who look for individual protection devices (such as masks, disinfectants etc.), information and medicines to counteract Covid-19. We will focus on the contribution provided by pharmacists and on/offline pharmacies in the management of the Coronavirus pandemic, starting from the various types of e-Pharmaceutical care scattered all over Europe.

## **2. The Reasons behind the Research**

We showed the relationships between people's behaviour and their vaccination representations according to social characteristics, and the role of information sources in social media.

This study about the role of Vaccination in the era of Sars-Cov2 is mainly based on the analysis of what happened in mid-July 2021, when the vaccination campaign in Italy suffered an abrupt halt because the number of people ready to be vaccinated drastically decreased. The Rt contagion index, which was 0.5, in the face of greater freedom from the containment measures given by the Government, began to rise, affecting the

number of ordinary hospitalizations and those in COVID wards and intensive care (where the number of places available is still limited), as well as that of deaths. On 20 July 2021, the Italian government issued legislation on the mandatory nature of the Green Digital Pass (hereinafter referred to as the "Green Pass"), i.e., a document that certifies that one is vaccinated or cured of COVID-19.

The Green Pass allows entry to certain places only for those who have been vaccinated, penalizing those who have not. People who have been vaccinated can download the Pass from the "IO" app or the website of the Italian Ministry of Health or use a printed document with a QR code. They must show this permit to travel and access public places such as restaurants and gyms.

Between 21 and 28 July 2021, the press, with an immediate rebound on social media, placed great emphasis via the news on the Green Pass, and there was a boom in booking for vaccines. In the first week of August 2021, according to the weekly government report published by the extraordinary Commissioner for the COVID-19 emergency, the doses currently injected were 71,071,465, with an increase in the last week of 3,316,075. The government regulation of 1 August on the suspension from work without any remuneration or incentive for medical, health, and school/university personnel without a Green Pass also contributed to this figure. Furthermore, the Green Pass will be mandatory for students over 12 years of age for school and university attendance. As of 7 August 2021, the measures became operational in various health centers with enormous mass-media prominence. On 9 August 2021, the Italian Health Minister proudly declared that 20 million Green Passes had been downloaded from the ministerial platform in 2 days.

### **3. Methodology**

The survey was conducted in the reference period June-August 2021 at the Covid Vaccination Center at the A.O.U. "San Giovanni di Dio and Ruggi d'Aragona" of Salerno (Campania, Italy). Following the inoculation of the vaccine and during the expected waiting time according to the vaccination protocol (from 15 to 30 minutes depending on the risk of adverse reactions due to diseases / allergies), users were shown a QRCode linked to the link of the questionnaire on the Google Forms platform or, alternatively, in paper form.

#### **3.1. Objectives and Participants**

The purpose of this work was to investigate the phenomenon and the underlying reasons for not getting vaccinated or postponing the COVID-19 vaccine, as well as any changes following the obligation of the Green Pass. To this end, we monitored and interviewed patients at the COVID Vaccinal Center located at the "San Giovanni di Dio e Ruggi d'Aragona" AOU in Salerno (Campania, Italy) (hereinafter referred to as the "AOU of Salerno"). Furthermore, to better understand the media impact of the phenomenon, through a qualitative analysis of the articles of "Il Mattino", the main newspaper of the Campania Region, we determined which arguments were emphasized by the local press

and, therefore, impacted the perception of people enough to convince those who refused or postponed the vaccine to change their stance.

### 3.2. Data Collection

#### 1. Drop-In Bookings and Their Resumption

Through the vaccination reservation offices of the AOU of Salerno, the curves of the decline in the number of vaccinations delivered and their point of occurrence, as well as their subsequent increase following the publication of the regulation on the Green Pass, were monitored.

#### 2. Interviews with Vaccine-Hesitant Persons

In the period between 19 and 31 July 2021, 83 vaccinators were interviewed at the Salerno AOU who had postponed the first vaccine dose and who were booked at a later time following the government announcements and the media rebound on the Green Pass. The sample included 83 people (45.8% women). The mean age was  $22.24 \pm 4.308$  and ranged from 13 to 31 years. The Vaccinal Center covers, for health reasons, the city of Salerno (Campania, Italy) with 128,302 inhabitants (data updated to 2021), and 82.47% took the first dose of the COVID-19 vaccine. However, in order to facilitate the safe continuation of the vaccination campaign and to avoid inconvenience, the “ASL Salerno” (local health institution) has strengthened offers of COVID-19 vaccine administration centers to set up a “HUB”, i.e., temporary health centers used at schools, theaters, churches and municipal buildings, that offer citizens a choice to book the day and location according to their preferences. They completed a questionnaire consisting of 28 items; for the present study, the results of questions 26 and 28 were applicable, related to the reason for absence at the first call and thoughts on the COVID-19 vaccine.

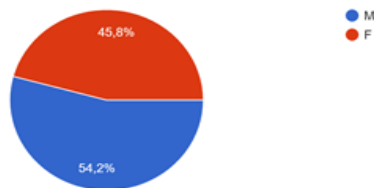


Fig. 1. Representation by gender of the sample

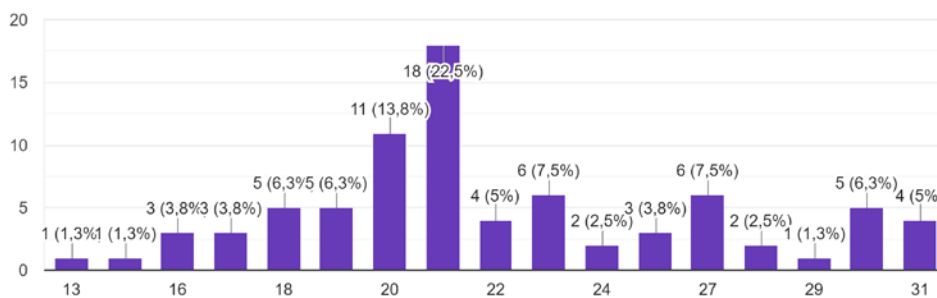


Fig. 2. Representation by age of the sample

### 3.3. Qualitative analysis of journalistic content

Lastly, a content analysis was carried out using the T-lab plus software on 205 articles that explored arguments related to the Green Pass, published between 23 and 29 July in the Campania regional newspaper "Il Mattino".

## 4. Results

### 1. Drop-In Bookings and Their Resumption

The percentage absence in July 2021 was equal to 14% of those called for the first dose of vaccine, compared to values of 3.9% in March, 4.24% in April, 4.34% in May, and 3.57% in June of the same year.

According to the data in the possession of the AOU of Salerno, there was an evident resumption in reservations on the ministerial platform starting on 19 July, with about 1000 more people than the previous week.

### 2. Interview with Vaccine-Hesitant Persons

When asked "Did you get vaccinated when summoned by the regional platform?", 19.3% of the participants answered negatively, instead choosing to do so after 20 July (i.e., after the Green Pass was required). The reasons for this delay were as follows: 3.7% believed that the risks of contracting the virus were low, thus only considering the vaccine necessary for the mandatory cases.

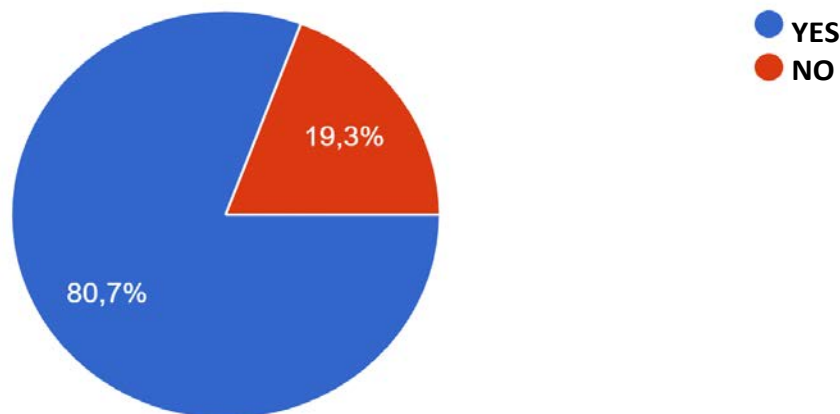


Fig. 3. Answers to the question "Did you get vaccinated when you were summoned by the regional platform?"

The reasons for this delay, as shown in Graph 2, were for 3.7% the belief that the risks of contracting the virus are lower than those of having inoculated the vaccine and therefore of having deemed it necessary only for the sake of the mandatory nature of the Green Pass; 4.9% preferred to wait a few more months to get more information on the vaccine; and 1.2% displayed fear arising from the conflicting information disclosed by the mass media.

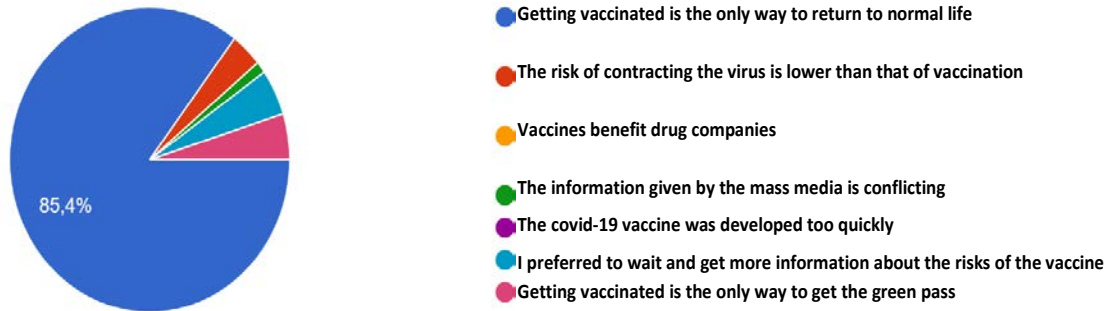


Fig. 4. Answers to the question "What are the reasons that led to this decision?"

#### Qualitative content analysis

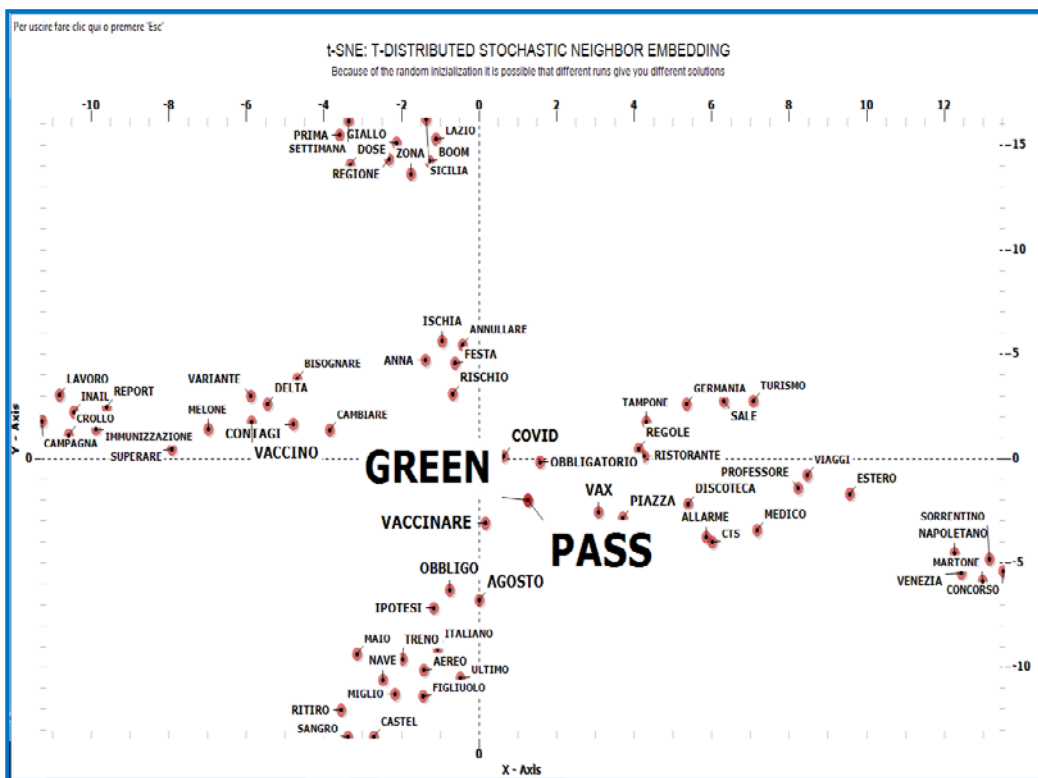


Fig. 5. Network analysis

From the network analysis carried out on the information published by the major local newspaper "Il Mattino" emerged the relative representations that they could generate on public opinion in the cultural context of the vaccinated recipients monitored and interviewed.

Graph 6 shows that the network analysis linked to the "Green Pass" terminology highlights two different representations on the two evident dimensions: on the y-axis there are significantly the terms "vaccine, contagion, immunize", or the Green Pass is linked to the vaccine and has the purpose of curbing the infection and immunizing the population.

On the y + axis, on the other hand, we find the terms "restaurant, disco, travel, abroad, tourism" "doctor" "professor", thus emphasizing the social and work limitations that will occur without the possession of the Green Pass.

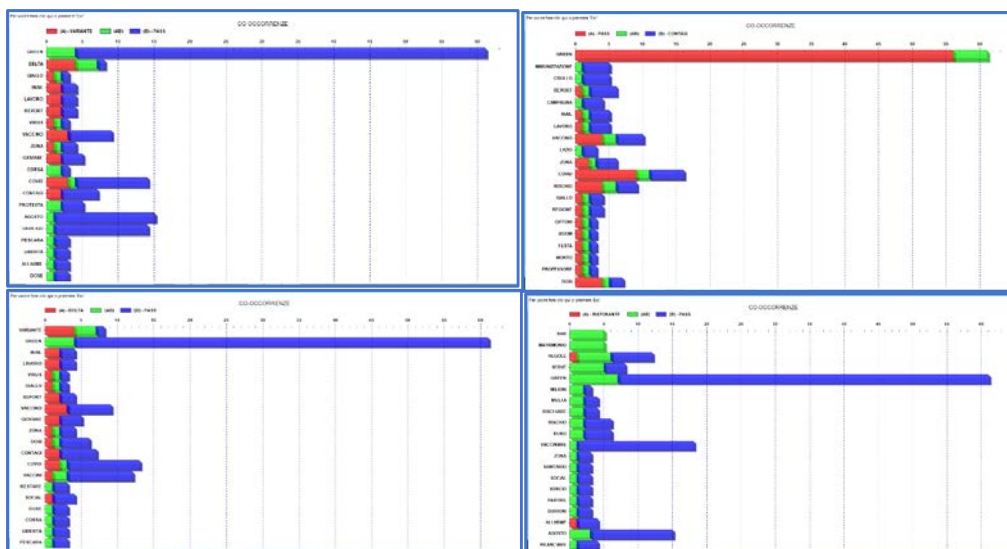


Fig. 6. Comparisons between word pairs

We then conducted an analysis of the word pairs, which is represented in graph 6 where the green color represents the co-occurrence of two terms, and the most significant is the co-occurrence between a (restaurant) and b (Green Pass) and is present for the words "bar, wedding, rules, serves".

The words "risk, covid, variant, delta" have no significance in the co-occurrence with the lemma "Green Pass". We can therefore conclude that in the press the Green Pass was presented essentially as a Passport necessary for social life, rather than linked to the vaccine as a lifesaver. Transitively, therefore, it seems that the increase in vaccine reservations has been linked to fears of being limited in social life, rather than to the belief that the vaccine is necessary in order not to get sick with Covid-19.

## 5. Final Remarks

Our results reinforce the importance of being knowledgeable about the immunization process, from experts and of rejecting conspiratorial disinformation about vaccines, and personal assessments of risk in the development of vaccination intentions. Exposure to health information has also shown the potential consequences disparities in

informational access. Our study of the spread of vaccination beliefs after the introduction of the Green Pass showed that these beliefs could spread through social media (magazine), converting people to the so-called vaccination acceptance. For preventive health efforts, this work highlights the potential to use evidence from information flow as a strategy for identifying relevant communities for targeted vaccination efforts. The results also suggest that belief change in these instances is likely a complex contagion, requiring social reinforcement for a change in sentiment, rather than a simple contagion requiring only exposure to new information. A program of outreach is necessary to educate the uninformed; challenge disinformation about future COVID-19 vaccines, as well as vaccines in general; and help those with low level education to appraise accurately their personal risk and to inform these people that the vaccines are prevention not care otherwise, although perceiving the disease as severe, the intention to vaccinate will be adversely affected by considering the vaccine as unsafe (Karlsson L.C., Soveri A., Lewandowsky S. et al. 2021). In other words, is the hour to develop anew synergies between communication and public health experts to improve and develop strategies for social sanitary communication encouraging the uptake of COVID-19 vaccines.

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