

Managing the risks of the Coronavirus Pandemic: the case of the Mediterranean island of Menorca

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Abstract

The COVID-19 crisis could act as a catalyst for a series of social, economic, and political changes since it has sensitized governments and institutions on the need for a structural paradigm shift in their growth models from a triple economic, environmental and social perspective. This article offers a case study of the Spanish island of Menorca and its incidence rates in comparison with other territories of the European Union and Spain. Furthermore, we offer a brief description of the current context of the island and its function during the 19th century as a point of control and containment of infectious diseases in the Lazaretto of Maó. This study intends to interpret how the COVID-19 management has been carried out considering the actions made at the State, regional (autonomous community), insular and local levels. The paper is focused principally on the preventive actions at the insular level to know if some of these actions made during the crisis Covid and insular particularities before the start of the pandemic are conditions for the control of the COVID-19 and its incidence rates on the island.

Keywords

Menorca, COVID-19 crisis management, Biosphere Reserve, Civil Society

1. Introduction

The disease is part of the history of humanity, which despite its effects, disease management has allowed us to advance as a society. On January 30, the World Health Organization declared the COVID-19 outbreak as a public health emergency of international concern (PHEIC). The SARS-CoV-2 (COVID-19) coronavirus pandemic has often been described as a global crisis unprecedented in our recent history affecting health and the economy. However, at the same time, we know that COVID-19 will not be the last pandemic or crisis to emerge, the change of ecosystems due to global warming derived from climate change and the interaction of man with the environment could increase these risks, so it is necessary to learn from the lessons received for the future.

Most countries have attempted to reduce transmission of the COVID-19 virus using different preparedness and response strategies to slow and control transmission and delay the spread. Trying, in addition, to minimize the epidemic's impact on health systems, social services and economic activity with more or less successful results. However, depending on the strategies applied, their results have not been the same in all regions and territories. Experience shows that stopping the successive waves of COVID-19 and the appearance of new variants can cope with the pandemic's consequences with high vaccination rates, together with the use of masks and the maintenance of social distance (The Academy of Medical Sciences, 2021).

For example, in Japan, they adopted a "new way of life" where people will have to live with the virus. Japan followed the idea of maximizing efforts to suppress transmission and minimize socioeconomic damage through three preventive measures: Early cluster detection and early response. Improvement of the intensive care system and safety of the medical service for seriously ill patients, including medical equipment. Modification of the behavior of citizens (Sayeed & Hossain, 2020).

Initial response to the pandemic in other countries such as Australia, the governments responded by closing borders and implementing mandatory home isolation for returned citizens. These border closures stopped the spread of the virus and allowed the building of a testing and tracing system effective at controlling the spread (Johnston, PHAA, 2020).

In Europe, the current crisis of the coronavirus pandemic has taught us that many countries were not sufficiently prepared. Moreover, the crisis unchained by the pandemic could act as a driver for a series of social, economic, and political changes since it has raised awareness in governments and institutions about the need for a structural paradigm shift in their growth models from a triple perspective (economic, environmental and social).

In the European Union, the effects of the crisis have not been symmetrical for all member states; Spain, Italy, and France have been the most affected countries in the first stage of the pandemic. However, high vaccination rates have allowed countries like Spain to mitigate its effects in recent months. Among the initiatives that emerged from Europe, we can highlight the statement published in June 2020 by the European Commission by independent experts. This statement provides guidance for the provision of scientific advice in pandemic situations, particularly during the current COVID-19 crisis, characterized by complexity and uncertainty. In addition, in November 2020, the European Commission published the advice on better management and preparation for pandemics. With the arrival of the Delta variant and the new Omicron variant, European countries are applying measures such as the closure and control of flights, new restrictions to citizens designed to fight infection levels and calls to accelerate vaccination in countries with fewer vaccinated populations.

This article presents the case study of the Spanish island of Menorca, where the incidence rates of COVID-19 have been lower than in other regions and territories in the early phases of the pandemic, both in Spain and in the European Union. This study tries to interpret how the management of the COVID-19 crisis has been carried out on the island of Menorca, considering the cascading effects of decisions made at various levels: state, regional, island and local. The time frame of this study focuses on the start of the pandemic until the end of 2021. This work focuses on preventive actions at the island level and on discerning whether the island characteristics already present before the pandemic, together with some of the measures implemented during the crisis, contributed to controlling the spread of the disease, as well as the incidence rates on the island. We will also study how the management of the COVID-19 crisis is adapting to the evolution of the situation. In this work, the actions implemented in the economic field are omitted, and only a brief description is provided that, although they have been important, are left out of our study. Although it is not an exhaustive study of all the actions carried out on the island, as Mata (2006) and other authors mention, we believe that the islands can be interesting laboratories to study the functioning of social systems. The islands allow us to observe and compare global phenomena on a small scale, the geographical fact of insularity raises some specific aspects that, due to their size, configuration, location and political organization, can serve as management references that can be extrapolated to a larger scale.

2. Main Characteristics of the Island of Menorca: Territory, Socioeconomic and Administrative Structure

The island of Menorca is part of the archipelago of the Balearic Islands in the Mediterranean Sea, off the east coast of mainland Spain. It is the second-largest island of the Balearic Islands with an approximate area of 694 km². As for orography, the northern part has a rugged coastline with several islets and little vegetation due to the cold north wind, known as the “*Tramuntana*”. The southern part, formed by calcareous rock, presents soft and undulating cliffs with white sand coves surrounded by pine trees. *Monte Toro*, located in the center of the island, is the highest point and is 358 m above sea level. Menorca has a typical Mediterranean climate characterized by warm temperatures with maximum precipitation rates in autumn and low rates in summer (Jansà et al., 1981). Due to its geographical location in the middle of the western Mediterranean, Menorca has been a stopping point for different cultures since prehistoric times.

The island of Menorca belongs to the Autonomous Community of the Balearic Islands. In addition, as reflected in the Statute of Autonomy of the Balearic Islands (2007), Menorca has its political organization on an island scale with the *Consell Insular de Menorca* (CIME), regulated in the law 8/2000, of October 27. Furthermore, the island is distributed in eight municipalities. The towns of Ciutadella to the west of the island and Maó to the east have more than 50% of the total population.



Fig 1. Map of Menorca. [Source: <https://www.google.es/maps/>]

Menorca has a population of 95,936 inhabitants (INE 2021). However, it is necessary to consider that as an island with an important tourist offer, the population in summer exceeds 200,000 inhabitants, assuming an annual accumulated of 1.5 million people (IBESTAT, 2021). Regarding the demographic dynamics, as Fullana (2005) mentions, the population of Menorca in the last 150 years has been highly conditioned by migratory movements, with a decrease at the beginning of the century and reversing the trend in the 1980s, to the end of the 20th century when the maximum values occurred. Mainly due to the need for tourist activity. On the other hand, it should be noted that the arrival of tourism to Menorca was much later than the rest of the Balearic Islands, mainly due to the great weight of the dairy sector in the primary sector and a strong footwear and jewelry industry. This fact has made the natural environment much better preserved.

On October 8, 1993, UNESCO recognized Menorca as a Biosphere Reserve¹ considering the high degree of compatibility achieved between the development of economic activities, the conservation of heritage, and landscape that has maintained an exceptional quality with a remarkable diversity of Mediterranean habitats. Furthermore, Menorca is the largest Marine Biosphere Reserve in the Mediterranean. The CIME is the institution responsible for the reserve whose strategy is based on five pillars: Environment, Social welfare, tourism, culture, and economy. Since the declaration as a biosphere reserve, Menorca dotted itself with resources for preserving its territory, such as the Insular Territorial Plan (PTI) approved in 2003 (CIME, 2003; Mata. 2006), which has been adapted and currently revised and in the initial approval phase (CIME, 2021). In addition, since 2012 the island is a member of the World Network of Insular and Coastal Biosphere Reserves, a forum for cooperation and knowledge transfer between distant territories facing common challenges, which features two technical secretariats: one in Jeju Island (South Korea), addressing climate change, and one in Menorca, focusing on sustainable development (UNESCO, 2012).

2.1. Menorca as a point of control and prevention of pandemics: the sanitary fortresses Lazaretto of Maó

During the early modern period and until the end of the 19th century, maritime navigation was one of the mechanisms for spreading infectious diseases and a system for the expansion of epidemics and pandemics. For the control of contagious diseases, buildings were created to control them and prevent their spread. The lazarettos were health facilities for the isolation, disinfection and care of merchandise, people or animals infected or suspected of suffering an epidemic or contagious disease in which people and merchandise remained in quarantine (Vidal 2002; Giménez and Gutiérrez, 2020; Leon et al., 2021).

Following the model of the Venetian lazarettos, the Maó's Lazaretto began its construction in 1793 and was completed in 1807, becoming the first permanent lazaretto in Spain and one of the most important in the western Mediterranean (Rodríguez-Ocaña 1988). The factors considered for its location on the island were: its Mediterranean's geographical and strategic location, the remarkable capacity of the port of Mahón, one of the largest natural ports in the world. and the considerable distance from the island with the Iberian Peninsula. All these reasons led to choosing Menorca as the best place for the construction of one of these "sanitary fortresses" to control infectious diseases from Africa and the Middle East (Ocaña, 2007).

The Maó Lazaretto has a constructed area of 9,903 m² surrounded by a double polygonal outer wall double outer wall, with a separation of 12 m. with three access doors: The west one, which was the main door; that of the south for merchandise; and the east or Cala Teulera, for affected by contagious diseases. In addition, it had watchtowers located at the vertices of the outer wall. It also had a double inner wall divided from east to west into two parts, called departments: the Dirty Patent Department and the Suspicious Patent Department (Vidal, 2002).

On September 1, 1817, the first ship arrived at the Maó Lazaretto to undergo quarantine. As a result, 13,864 ships, 111,184 passengers, and 276,693 crew were quarantined until it closed its doors permanently in 1919. In the 60s, it became a vacation spot for workers of the Ministry of Health and a venue for national and international health congresses such as the "*Escola de Salut Pública*," celebrated since 1989. On March 20, 2015, the Lazaretto was transferred to the CIME. Currently, it holds events and conferences, and the possibility of guided tours of the sanitary fortresses.

3. The Evolution of COVID-19 in Menorca until December 2021

On March 7, 2020, the *Conselleria de Salut i Consum del Govern Balear* confirmed the first positive case for SARS-CoV-2 in Menorca, currently (01/01/2022) the number of confirmed cases amounts to 9,059. Since the first diagnosis, the island has suffered six waves of greater or lesser intensity. The more significant number of cases coincided with the relaxation of mobility restrictions and the arrival of tourists and residents outside the island, especially students. It should be noted that during most of the pandemic, except for the maximum incidence peaks of each wave, Menorca was below 50 cases per 100,000 inhabitants. For example, between May 19 and June 17, 2020, Menorca reached a rate of incidence of zero, with no positive cases diagnosed, Menorca presented risk data well below the rest of the Balearic Islands and the whole of Spain.

In May and October 2021 the island presented a very low risk considering its low incidence rates and hospital occupancy. For example, in October the evolution in the pandemic incidence accumulated at 14 days was 18.8 per

100,000 inhabitants and at 7 days with 12.5 cases. Compared to other regions of the Spanish state, these good data have allowed hospital care not to collapse. However, it was necessary to enable more beds in the intensive care unit and reorganize hospital and primary care programming, as well as the reinforcement of health personnel to care for people affected by COVID-19. On the other hand, two “COVID hotels” were implemented to care for close contacts and patients with mild symptoms that were managed by the Units of Attention’s Coronavirus (UVAC). According to the epidemiologist Maties Torrent (2021), explaining the low incidence of the virus on the Island in the first stage of the pandemic is due to the UVAC, with tests, traces, and isolations.

However, since November 2021, especially with the arrival of the Omicron variant, the sixth wave has triggered the case number being the Balearic island with the worst incidence. The cumulative incidence at 14 days stood at 1.677 and with a positivity rate of 23,7% on the island of Menorca (December 31, 2021), data that had never been given during the entire evolution of the pandemic. Since December 2021, it has been proven that the Omicron variant is characterized by its great transmission capacity, much higher than what we have experienced with other trunks of the virus. However, it generates less serious effects and symptoms among those infected than other variants.

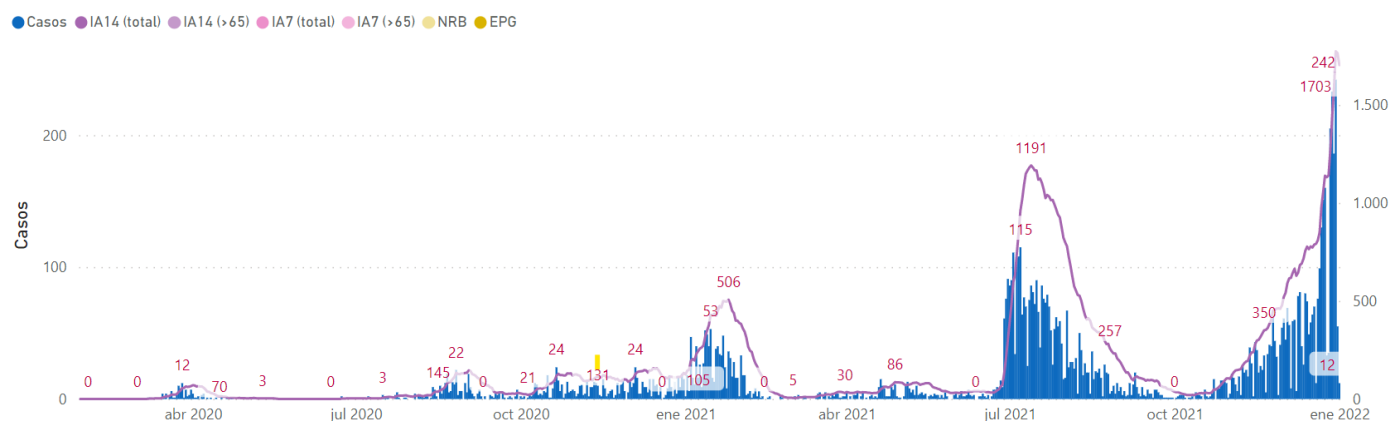


Fig 2. Confirmed cases, incidence at 14 days and seven days from the onset of the pandemic to January 1, 2022, on the island of Menorca. [Source: IBsalut.]

Since the diagnosis of the first Covid case in Menorca at the beginning of March last year, the mortality rate on the island is lower compared to the majority of Autonomous Communities and with the national average. In addition, it should be noted that according to the National Institute of Statistics (INE), in 2020, the Balearic Islands registered a mortality rate from coronavirus of 45.8 per 100,000 inhabitants. The national average was 127.5. Concerning the number of deaths due to the coronavirus on the island, the first notification in Menorca was on March 31, 2020. Since then, a total of 49 deaths have been reported (IBsalut, January 1, 2022). Considering the high incidence rates since the third quarter of 2021, the impact on mortality to COVID-19 is significantly lower than that of the onset of the first cases diagnosed between March and April 2020 and of the wave of the beginning of 2021, when the population was not vaccinated. Based on these data, the main conclusion is that vaccines are proving to be very effective. In addition, in most cases the disease is manifesting itself mildly.

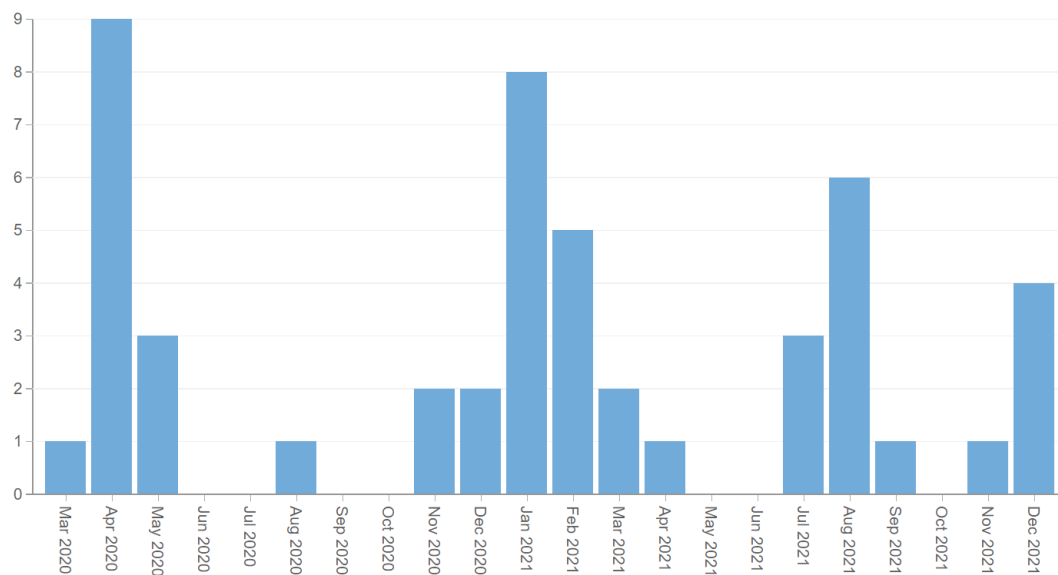


Fig 3. Menorca: Deaths by COVID per month from the start of the pandemic until December 2021. [Source: IBsalut.]

Referring to the vaccination strategy in Europe, the European Commission and the Member States of the European Union adopted a common EU approach to ensure supply and facilitate distribution agreements to purchase vaccines, within a specific period and at a set price (European Commission 2020). These coordination measures have allowed none of the UE Member States to fall behind in terms of obtaining vaccines for their respective territories.

On December 30, 2020, the Balearic Islands began the first vaccination phase against COVID-19. In this first phase, when the number of available doses was limited, following the vaccination strategy of the Ministry of Health (2020), a prioritization by groups was established starting the vaccination based on vulnerability and degree of exposure:

1. Residents in elderly centers and their health staff, people elderly and disabled in their homes, and their social-health staff.
2. Front-line health staff.
3. Other health and social-health staff.
4. People with disabilities who needed intensive support to develop their life.

Subsequently, the administration of doses to services considered essential, such as the security forces, began. Once these groups were vaccinated, the vaccination strategy applied was the administration of doses by age groups, vaccinating at this time minors from five years old. At the same time, booster doses are being administered to the population over 40 years of age. It is noteworthy that vaccination rates in Spain are among the highest in the world, ranking among the countries with the highest doses administered, demonstrating the excellent response and predisposition to vaccination by Spanish society.

Following the strategy implemented in the Balearic Islands, in the case of Menorca, in March 2021, two mass vaccination centers have been set up located in the two cities with the largest population (Maó and Ciutadella), thus having six vaccination lines with capacity to vaccinate 2,100 people a day. In Menorca, as in the rest of the Balearic Islands and Spain, the response to vaccination is very positive, exceeding 90% of the target population. So far, the total number of

inoculated doses is 162,314, people with a full regimen 80,524 (representing 94.4% of the island's population), 83,388 people with one dose (equivalent to 96.1% of the population of the island). Only 2,338 people have refused to administer the vaccine (IBsalut, 2022).

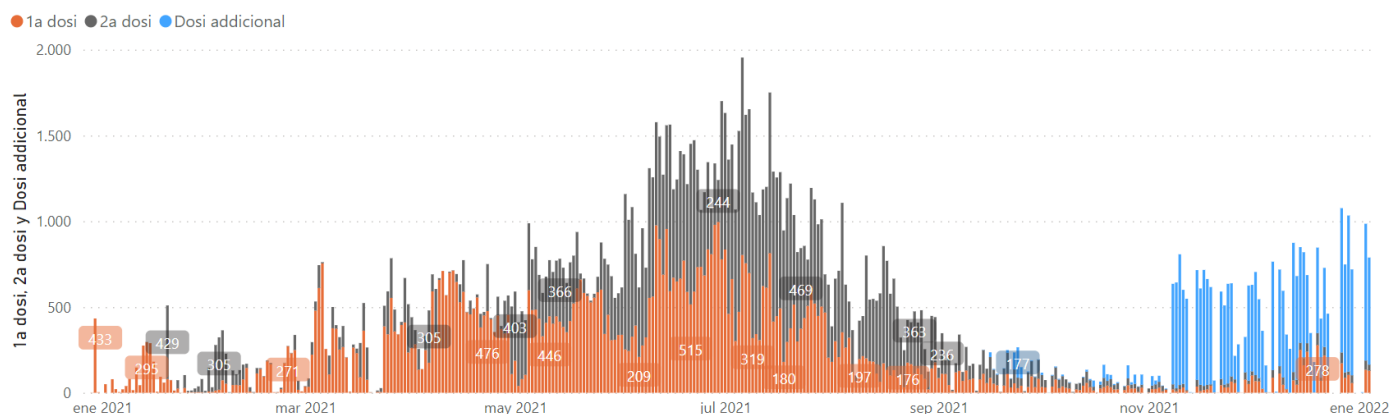


Fig 4. Vaccination rates in the island of Menorca. [Source: IBsalut.]

In Menorca, in terms of vaccination rates, we can see how people over 60 years of age are fully vaccinated. However, we consider it relevant to highlight that the age groups with the lowest vaccination rate are those between 30 and 39 years old (82.4%) and those between 40 and 49 years old (89.1%). On the other hand, it is worth noting the excellent response of adolescents and young people aged 16 to 19 and 20 to 29 years old, with vaccination rates of 96.6% and 93%, respectively. Although the age range between 12 and 15 years is 83.2%, these data are not considered comparable when the vaccination of this group was just started. Observing good results in vaccination, we can conclude that, in general, there is a great awareness on the part of Menorcan society of the effectiveness of the vaccine as a barrier to transmission of the virus and mitigation of its effects.

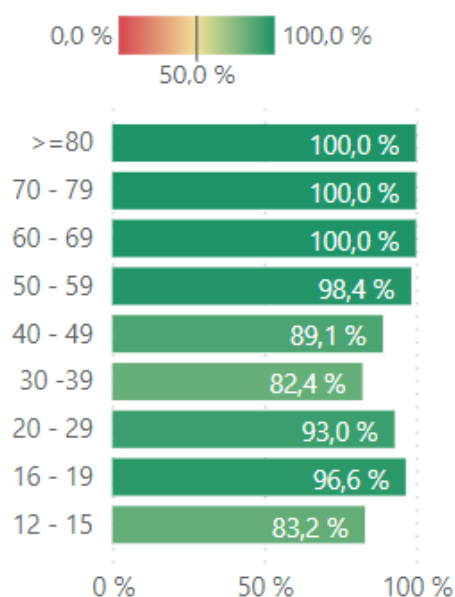


Fig 5. Complete vaccination coverage by age group in Menorca. [Source: IBsalut.]

4. The Management of the COVID-19 Crisis

On March 14, 2020, the Spanish government declared a state of alarm to face the rapid spread of COVID-19 with severe measures to restrict the mobility of people and economic activity, except in cases of force majeure and essential services. Consequently, due to the closure of airports and ports, the Balearic Islands, including Menorca, were almost isolated. This isolation and home confinement measures led to a low prevalence of COVID-19 in this region during the first wave. Although the government initially established a state of alarm for 15 days, up to six extensions were necessary until June 21, when Spain entered the “new normality.”

During this quarantine period, the main containment measures affecting the general population were the following (Pinedo et al., 2021):

- The freedom of movement of people in the public realm was restricted; citizens were required to remain confined to their homes except for a very limited number of essential activities, force majeure, or critical situations.
- Classroom-based educational activity was suspended in all centers and at all levels and maintained through the online modalities.
- The opening to the public of the commercial, cultural and recreational activity were suspended, with some exceptions.
- Attendance at places of worship and civil and religious ceremonies, including funerals, conditioned on adopting organizational measures to maintain a safe distance.
- Reduction of operations for certain transports.
- Borders were closed, and non-essential travel was restricted.

Given the worsening rates of spread, On October 25, 2020, the Government of Spain declared a second state of emergency, in which the governments of the autonomous communities played a relevant role with the capacity to take specific measures in the field of each autonomous community in the management of the health crisis. This new state of alarm was extended until May 9, 2021. Among the measures adopted, delegated the main decisions to the Autonomous Communities' presidents. Also, the Autonomous Communities could limit the entry and exit of their territories, being able to apply the perimeter closure of the entire or a part of their territory. On the other hand, four alert levels were established: low, medium, high, or very high. The co-government for crisis management corresponded to the Interterritorial Council of the National Health System, in which the Autonomous Communities and the Ministry of Health participated. Among other actions, the Interterritorial Council established an Early Response Plan that determined the epidemiological criteria to face the COVID-19 pandemic (2020), with the aim that each community evaluate the risk, establish an alert level and adopt measures adaptable to the situation of each territory depending on of the combination of indicators in each territory. However, based on two appeals presented by the political party called VOX, in two sentences, the Constitutional Court (2021) declared unconstitutional the states of alarm decreed by the Government, among other reasons, for contravening the regulation of states of crisis and competencies among the autonomous communities and the central government.

In addition, among other measures at the local level, the territorial policy was reformed to allow local authorities to hold virtual meetings, dispensing with face-to-face attendance, and for municipalities to be able to use their budget surpluses against COVID-19 (Government of Spain, 2020). The autonomy granted to municipalities to have their own responses complements civil society and NGOs' actions.

In the Balearic Islands, the island is the territorial unit used to implement preventive measures to control the pandemic. With this model, each of the islands applied a level of risk based on the incidence data. The application of this measure allows better decision-making at the local level, applying differentiated restrictions in terms of capacity, closure of activities, or limitations on the mobility of the population. These differentiated measures allowed that in many phases of the pandemic the restrictions in Menorca have been lower compared to the rest of the islands of the archipelago and other territories of Spain.

Although with the arrival of COVID-19, the priority has been to strengthen the health system, it is also necessary to implement measures to minimize the impact on the economy. To this end, the Central, Autonomous and Local Governments have implemented measures such as direct aid for companies, workers and families.

At the insular level, the CIME, in May 2020, presented the “Menorca Covid-19 Plan”, divided into three stages. A shock plan in the first stage, initiated at the beginning of the state of alarm, aimed at reinforcing social emergency aid and creating measures that urgently supported the society and the economy. A second stage with measures to boost the reactivation of the economy and social support. And a third stage based on a socioeconomic recovery strategy in accordance with the new reality caused by the pandemic. This Plan was incorporated into the “Reactivation Agreement of the Balearic Islands,” supported by the main economic, social, and political agents signed in July 2020. The agreement established 10 axes of work structured in 131 measures to the needs of the COVID-19 crisis of Balearic society, which have been updated and adapted to the pandemic evolution.

4.1. The role of citizens and Civil Society in the management of the pandemic of COVID-19: public and private collaboration

The participation of the Civil Society in the management of the crisis caused by COVID-19 on the island of Menorca should be considered very relevant. Different groups, companies, NGOs, business organizations and individuals participated in it. Maroscia and Ruíz (2021) mention that in crisis contexts, civil society organizations acquire a fundamental role. On the one hand, because the community and its direct beneficiaries require more assistance and, on the other hand, because they promote initiatives to solve people's problems. On the other hand, success in building a good government requires the confluence of at least three variables: A critical juncture, as is the case of the pandemic caused by COVID-19; initial reforms that generate horizontal instances of accountability; And a coalition of political and social forces with the capacity to overcome the obstacles derived from collective action and the system (Villoria & Jiménez, 2021). We can see some examples of participation by Civil Society on the island.

4.1.1. Actions implemented in the field of Education and Culture

According to the Social Observatory of the Balearic Islands (2020), the pandemic has increased educational inequalities among the most disadvantaged groups, given that confinement has involved the use of digital media at school. In addition, it also implies the deprivation of a space for socialization and coexistence such as the school. Finally, the school continued to be confined for health reasons, representing a problem for many families, by depriving schools of the social function of guardianship and custody, a role that goes beyond the purely educational and socializing function.

In line with the Spanish Autonomous Communities, on March 13, 2020, the Government of the Balearic Islands launched a series of measures to contain the virus. Among the measures implemented regarding the educational community, it was established that as of Monday, March 16, and initially for two weeks, face-to-face educational activity was

suspended in all educational centers and levels, including university education. Furthermore, internships for university students in academic centers were suspended. In this confinement situation, new needs appeared in schoolchildren and young people, such as the lack of resources and computer equipment to digitally follow the educational content provided by schools.

Among the actions to highlight on the island of Menorca in this situation of confinement with the aim of avoiding these educational inequalities as far as possible, the *Conselleria de Educació del Govern Balear* and educational centers made computer equipment available to families with needs. On the other hand, the CIME launched a mechanism to provide internet to those homes where no type of connection was available so that schoolchildren could access the teaching materials made available through the internet from schools and make it possible to attend classes virtually. In addition, in non-formal education, access was facilitated for young people enrolled in youth guarantee training. Once the families' economic and social needs were evaluated, thanks to this initiative a total of 190 students of Menorca were able to benefit from the 220 requests made. In accordance with the needs detected by the *Conselleria de Educación del Govern Balear* and the management teams of the educational centers, the CIME, through its public IT and communications company and with the collaboration of local operators. The new connections were made fundamentally through the publicly-owned communications network of the CIME with WiMAX technology, which allows high-speed internet with coverage throughout the island.

On the other hand, in May 2021, the Department of Culture, Education, Youth and Sports of the CIME within the helplines aimed at mitigating the economic and social effects on young people as a result of the COVID-19 crisis. Among these actions to facilitate access to information and communication in young people, a line of Grants was established for the acquisition of computer equipment, for the financing of the purchase expenses of computers, and other equipment needed to study or work. Another of the aid lines was used to finance registration fees and fees to participate in non-regulated artistic, cultural, leisure and sports training activities.

The world of culture has not been oblivious to the pandemic effects and has also actively visualized it with measures such as online music and poetry festivals. In addition, the CIME Department of Culture, in order to respond to the pandemic crisis in this sector, launched the Menorca Cultural Rescue Program, based on an extraordinary budget to help cultural activity; the public contracting of local artists to compensate for the lack of private programming; and the collaboration with the municipalities of the island and with the Government of the Balearic Islands as the main promoters of cultural activity. For example, 24 local artists organized the "*Art en la fragilitat*" (Art in fragility) exhibition. On the other hand, seven of these local artists donated works to raise funds to support Cáritas and the Red Cross.

4.1.2. Implementation of educational measures for the protection and prevention of COVID-19: "*No ho escampis!*"

To curb the transmission of COVID-19, practically in all the countries and territories worldwide, carried out campaigns to publicize preventive measures to citizens. Among these measures, it is worth highlighting maintaining the safety distance between people, the use of the mask, correct hand hygiene and the cleaning and disinfection of spaces and belongings. These educational and awareness actions to encourage and promote healthy habits aim to develop skills and social values to improve the population's health. In the case of Menorca, we can highlight, the educational informative workshops carried out by *L'Àrea de Salut de Menorca* with the collaboration of the CIME called "*No ho escampis!*" (Don't spread it) (2020).

The campaign “*No ho escampis!*” began in July 2020 focused on giving workshops and talks with the aim of raising public awareness about protection and prevention measures to avoid infectious diseases, specially COVID-19. Those in charge of imparting these pieces of training were professional volunteers from the Mateu Orfila Hospital’s infection control and hand hygiene observation group. Initially, with informative talks for the whole population. Subsequently, students from all educational cycles of 22 schools received training actions through active participation adapted to the different ages to provide both students and teachers with useful tools and specific guidelines. These workshops reached a total of 5,906 students, with 351 sessions, and 539 training hours invested. A questionnaire to know the degree of satisfaction among teachers concluded that the educational workshops in Menorca for preventive measures for infectious diseases reached the objectives with a remarkably high result (Barber & Gutiérrez, 2021). In addition, as part of the campaign and to reach visitors, the CIME and the Fundació Foment del Turisme de Menorca (FFTM) hired 30 Covid informants to inform the security and control measures in Menorca to prevent the spread of the virus.

4.1.3. Public-private collaboration to provide material for the protection and disinfection of public spaces

Throughout the pandemic, we can observe many displays of solidarity in the island. One of these examples of public-private Menorca’s collaboration in the management of the pandemic can be seen in the response given to the possible lack of health protection material in the first phase of the pandemic. One of the potential problems on the island was the lack of medical supplies such as gowns, masks and protective screens for health and social-health staff. Given the possible lack of supply, according with the management of the Hospital Mateu Orfila, the Main Hospital on the island, the CIME, and several footwear companies on the island set up a temporary factory in the Maó Municipal Sports Center to produce this medical material and have stock in case of strict necessity in a hypothetical scenario of shortages. The building was chosen for its proximity to the Hospital. Those in charge of the elaboration were volunteers. On the other hand, many companies donated masks and gloves for health services and security forces due to the lack of these supplies. In addition, many individuals made masks for the general population, especially the most disadvantaged.

With the belief that the massive use of chemical disinfectants in public spaces could rapidly deactivate COVID-19, towns and cities made significant efforts to disinfect public areas prone to the risk of spreading the virus. For example, in the first phase of the pandemic on the island of Menorca, one of the main concerns was the disinfection of public spaces to prevent the transmission of the virus. To do this, in March 2020, an initiative between municipalities and the Insular Council, in collaboration with agricultural associations, firefighters and Civil Protection, was the disinfection of streets, squares and transit spaces. In addition, a local company donated sodium hypochlorite, and the farmers helped with their tractors to clean these spaces. This initiative ceased once the World Health Organization (2020) reported the uselessness of this measure recommending not to fumigate outdoor spaces as it posed a health risk.

4.1.4. Actions implemented for vulnerable people

Due to the state of alarm declaration on March 14, 2020, the lockdown requirements to contain the virus spread had a significant impact on the most vulnerable people, the homeless being a particularly affected group with difficulties accessing adequate spaces for care, hygiene, or isolation. In addition, the reduction or elimination of services such as the closure of bars, restaurants, food banks, soup kitchens. The closure of public restrooms, civic centers, and others further increased their high vulnerability.

Aware of this need and given the limitations of space in the municipal refuges, the CIME, *Càritas de Menorca* (official agency of the Catholic Church), and the Red Cross initially set up a building donated by the Bishopric of Menorca to serve

the homeless. This Building was adapted to nine people. Given the possible entry of new requests, the CIME, through the Departments of Social Welfare and Housing, decided to transfer this service to a CIME's youth hostel, called "Sa Vinyeta," with a capacity of 30 places. In addition, with individual rooms, Sa Vinyeta allowed compliance with the prevention measures of COVID-19. The Red Cross offered a team of volunteers to offer assistance services.

Loneliness due to lockdown measures was another factor of lack of protection, especially for older people who need more monitoring and control. In Menorca, Caritas, the Red Cross and individual volunteers using the local census provided by local governments, volunteer teams went around homes of people 65 and older who were living alone during the lockdown to check if they needed food, medicine. In addition, companies and individuals donated food for the most vulnerable groups.

4.1.5. Science as a vaccine against the pandemic

In different parts of the world, many researchers and academics are working to find out the effects, lessons learned, and results of managing COVID-19 in the lives of citizens and how they are coping with the changes. As a result, we can observe countless articles and conferences worldwide on COVID-19 from different research fields. In this sense, the island of Menorca is not an exception either. The humanistic and scientific tradition of the island of Menorca is well known in its closest territorial environment. Furthermore, as Vidal Hernández (2007) comments, a personality as relevant in Catalan culture as Josep Pla stated that he did not know of another territory with similar characteristics with so many published studies. An example of these academic activities is the School of Public Health, held every year at the Lazaretto de Maó since 1989.

The XXXI edition of the School of Public Health of Menorca, held in virtual format, had the COVID-19 pandemic as a topic of debate, with a total of six activities aimed at analyzing the repercussions of the pandemic in all related aspects with public health. This edition featured speakers of recognized prestige, Spanish, European, and American, who contributed their knowledge, experiences, and opinions on topics such as the origin and causes of the pandemic; access to medicines and vaccines; the future of public health in the post-covid era; social inequalities with this health crisis; health assets and the role of Primary Care; and also on mathematical models and predictions about the evolution of the pandemic.

The XXXII edition of the School of Public Health of the year 2021 was developed to give possible answers to all the new questions generated by COVID-19 and raise questions that will help prepare for the future. The program included six face-to-face courses and 12 meetings, five face-to-face and seven online, with an essential role in different aspects related to COVID-19 or that have become more relevant due to the pandemic. The courses addressed the emotional and psychological aspects that have emerged with the pandemic, community action in health or racism, and the new concept of planetary health, which will undoubtedly be one of the main challenges of public health in the coming decades. In the meetings, analyzed various prospects of COVID-19, such as mental health, communication, or governance. A group promoted by the Spanish Society of Public Health and Health Administration (SESPAS) carried out the analysis of the structure and operation of the future State Public Health Center, to approach future health crises. It is worth highlighting the meeting of the group of international experts on intellectual property to prepare a document to define how to consider patents and intellectual property in the future in the face of Pandemics to guarantee equity and universality access to vaccines and health technologies.

5. Discussion

Throughout the pandemic, we observed great displays of solidarity in Menorcan society and strengthened public-private collaboration, with the active participation of companies, NGOs, civil associations from different fields, and the scientific and academic community. This solidarity can also be seen in the high vaccination rates against Covid-19. The fact that the island is a Biosphere Reserve, although it serves to control population growth, or that in the past it had the largest lazaretto in Spain, does not seem relevant in COVID-19 management.

However, there are different perceptions of how the pandemic should be managed. On the one hand, greater restrictive measures were demanded in terms of mobility, especially in harbors and airports, to avoid further transmission of the virus. On the other hand, others consider that the restrictions, especially in leisure and tourism, damage the economy excessively and should be laxer. In addition, a large part of the population thinks that the measures have not sufficiently considered the particularities of the island. A study by Villalonga-Olives, Kawachi, and Hernández-Aguado (2021), observed different opinions about the opening of the island. Almost all the participants highlighted that tourists posed a contagion threat. But islanders who rely mainly on tourist income advocated reopening despite the risk. Others with different jobs, including healthcare workers, viewed the lack of restrictions as a significant risk.

Although we observed that a large number of joint measures implemented, both health and economic, by the governments (central, regional, and local), one of the issues to highlight is the perception of a lack of trust in politicians, with criticism of low quality, improvisation and changes in strategies in the management of COVID-19, observing a lack of cohesion and coordination. This perception about politicians can explain due to the notable decrease in trust in institutions derived from the economic crisis in 2008.

Finally, like other territories, a population depletion is observed after two years of the pandemic. Vaccines' arrival and the decrease in cases of COVID-19 gave a return to normality sensation. However, the increase in cases due to the new variant of the Omicron coronavirus again raises doubts about a similar life to the pre-pandemic, which means psychosocial wear and tear among the population that can have long-term consequences.

6. Conclusions

Through this study, we can identify some strengths of Menorca. First, small island territory allowed better control of the virus than other Spanish territories, especially in the early stages of the pandemic with the lockdown. With the data obtained, it can be seen that the peaks of contagion occurred with the arrival of visitors or residents who temporarily lived outside the island. In addition, the strategy carried out by the UVACs allowed the low incidence of the virus in the first stages of the pandemic, with tests, tracking and isolation. The mobility residents restrictions during the lockdown, together with access restrictions to the island prevented the spread of the virus. The requirement for antigen test certificates for non-residents on the island and later vaccination certificates contributed to the early detection of cases, which led to better management of COVID-19. Furthermore, having the island-wide political organization like the Consell Insular de Menorca facilitated the implementation and coordination of measures between the Central Government, the Autonomous Community, and the island's municipalities to alleviate the consequences of the pandemic. Another strength detected is solidarity in Menorcan society and public-private collaboration, with the active participation of companies, NGOs, and civil associations. Finally, high vaccination rates on the island can be an indicator of citizen solidarity. In addition, vaccination is very effective at higher spread rates due to the arrival of new variants of COVID-19.

Regarding the weaknesses detected, we can highlight the lack of trust in politicians in managing the pandemic. Some citizens think that economic interests have prevailed over health. In contrast, others consider the restrictions implemented to contain the virus excessive. This could be due to a lack of clear messages in the information provided to citizens. Never before have governments faced a pandemic of these characteristics in which the entire world has been affected, and the measures have changed throughout the evolution of the pandemic. There is no doubt that although measures have been implemented to implement aid for the most vulnerable, workers and companies, many citizens consider those insufficient. The economic and social damage inflicted on companies and people due to the restrictions and the degree of recovery once the exceptional measures to curb the spread of COVID-19 have ended represent one of the great challenges that will have to be faced in the future. Finally, we think that the population's feeling of exhaustion by the isolation measures after two years of the pandemic endangers social cohesion.

Considering that the pandemic is not over and the changes that are taking place from the different administrations in the management of the pandemic in terms of mobility restrictions, health protection, and others measures. Therefore, further studies will be needed to draw further conclusions.

Endnotes

1. According to UNESCO, the World Network of Biosphere Reserves (WNBR) covers all major representative natural and semi-natural ecosystems. In 2022, the WNBR comprised 727 biosphere reserves in 131 countries, including 22 transboundary sites. Biosphere Reserves involve in planning and management both local communities and interested parties, integrating three main "functions": conservation of biodiversity and cultural diversity; economic development that is socio-culturally and environmentally sustainable; and, development through research, monitoring, education and training. <https://en.unesco.org/node/314143>

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