

Chapter 26

Exclusion Processes Associated with COVID-19 Lockdowns

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Abstract

Lockdown has been the quintessential non-pharmacological measure to combat the spread of COVID-19. Virtually all countries have resorted to home confinement at some point during the pandemic. Although it has not been sufficient to stop the spread of the disease, its implementation has prevented countless deaths.

This chapter studies both the strengths and weaknesses of the measure, exploring possible adverse effects that it has caused, in order to achieve a better implementation of the measure in the face of future pandemic catastrophes. The methodological strategy consisted of a review of the literature on the measure applied both in the COVID-19 pandemic and in past epidemic catastrophes. The results of the research report that the lockdown has had serious effects on the population. These effects have often not been evenly distributed among the population, with the most vulnerable bearing the greatest costs. The research shows that it is necessary to learn from experience in order to refine strategies for future pandemic catastrophes.

Keywords: lockdown, COVID-19, inequality, social vulnerability, pandemic

Introduction

Lockdown has been a widely used containment strategy worldwide during the COVID-19 pandemic. Although its effect has not succeeded in halting the spread of the disease, it has

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considerably slowed it down and saved many lives. However, the strictness of the measure has completely revolutionized the lives of the citizens of the territories where it has been implemented. It has had a notable effect on different dimensions of life in society, such as environmental, psychological, economic and equality.

The aim of this research is to study the implications of the assimilation of the measure. Not only in terms of health benefits, but also in terms of the possible harmful effects that the measure may have had. Learning from experience is a unique resource that cannot be overlooked. Therefore, studying the behavior of the confinement measure both in the present and in the past is an obligatory task in these circumstances. To this end, and given the large production of scientific literature deployed in response to the catastrophe, we will try to identify not only the weaknesses of the measure but also its potentialities and opportunities for improvement. This will serve to help face future catastrophes from a more privileged position.

The chapter is organized as follows: It begins with a historical review of its implementation in past pandemic experiences. This approach will allow us to know the successes and mistakes of the strategy and thus to know its strong and weak points for other infectious contexts. Subsequently, a study of containment for the current COVID-19 pandemic will be conducted to characterize the degree and level of use at the international level, as well as its effects at the health level, i.e., in terms of infections and deaths. In addition, it also studies which alternatives or new ways of thinking about confinement optimize its results. Finally, the effects of the strategy at the social level are discussed. The objective of this section is to know the relationship between the measure and social phenomena such as mental health, economic vulnerability, ethnicity, age or gender. The chapter closes with a conclusion where the main results of the research are synthesized as recommendations for a better application of the measure in the face of future pandemic threats.

Historical Approach to the Lockdown

Infectious threats have accompanied humankind since the dawn of its existence; some scientific studies tell how they have plagued populations for more than 10,000 years (Spaulding 1984). Threats had to be dealt with without the advanced technical resources and scientific knowledge we have today to fight infectious threats. Their toolkit for dealing with these types of diseases included only general health notions such as sports, a healthy diet and good hygiene, as well as social distancing (Luo et al., 2020; Andrea A. Conti and Gensini 2007).

Infectious spread in the vast majority of epidemic infectious experiences has been associated with human mobility and that of animal and arthropod vectors. The pooling of different epidemiological contexts has been responsible for the greatest catastrophes in history in terms of lethality (Śez 2016; Gozalbes Cravioto and Garća Garća 2014).

The knowledge about the contagious nature of these diseases, dates back more than 2000 years ago. Already in the Old Testament, isolation appears as a strategy to prevent leprosy (Andrea A. Conti and Gensini 2007). As early as in the 6th century, Justinian, emperor of Byzantium, established measures to limit the mobility of people coming from territories affected by the plague that was ravaging the Roman Empire (A.A. Conti 2008). Thus, throughout history, different architectural devices such as lazarettos and protocols such as border control have been developed as a resource to contain infectious outbreaks (Tognotti

2013). These strategies often served as mechanisms of marginalization, affecting the most vulnerable strata more harshly, as healthy people were also sometimes interned in them (A.A. Conti 2008). Due to the contagious nature of these infections, it should be noted that they have always brought a strong stigma to the sick and the fact of being sick was already a reason for marginalization at all levels.

The origin of the quarantine comes from the Dalmata Coast, located on the shores of the Mediterranean Sea during the plague epidemic of the fourteenth century, where the measure was put in place to isolate the ships transporting goods for a period of forty days before being able to disembark. This measure was combined with border controls to control the spread of the plague (Andrea A. Conti and Gensini 2007). The Black Death succeeded in popularizing the measure internationally. Its resounding success led to attempts to extrapolate it to other infectious outbreaks, often without success, since the infectious process was not associated with contact between individuals, as in the case of cholera or yellow fever (A. A. Conti 2008). On these occasions, the implementation of the measure could only have adverse effects on those with whom it was implemented, as its usefulness was null. These facts show a key issue, which is that the containment strategy must be based on a specific knowledge of the disease and its infectious process, which means avoiding extrapolating formulas, no matter how successful they may have been in past chapters. Over time, the development of medical science achieved great advances such as vaccines and drugs that became the best weapons against infectious diseases (Riedel 2005). Thanks to this technology, great feats were achieved, such as the eradication of smallpox in 1980 (Henderson 1987).

However, these resources are not sufficient to control an infectious outbreak at an early stage, especially when the epidemic outbreak is caused by an emerging disease or a product of genetic drifts of previous diseases, such as seasonal influenza. The development of a vaccine is a slow process and requires a complementary tool to control the disease while it is developing.

Lockdown in the COVID-19 Pandemic

The lockdown as a measure to combat the spread of COVID-19 has been a strategy used by a large number of countries. According to data from the Oxford Covid-19 Government Response Tracker research project (Hale et al., 2021), 160 countries have employed the curfew at some point during the pandemic. This figure rises to 180 if one considers those countries that, despite not having implemented it in a mandatory manner, have recommended home confinement to the population.

During the pandemic there have been different versions of lockdown. Sometimes it has been implemented in a very rigorous manner where individuals were only allowed to go out in the street to obtain supplies of certain essential products and few other exceptions. While on other occasions, more lax confinements have been implemented where a greater degree of freedom was allowed, such as non-essential travel, like going out for a walk or playing sports.

The country that has used the measure in its strictest version for the most number of days has been China, which has had a total of 550 days of curfew, either nationally or locally. The figure rises to 610 if the least restrictive confinement is considered. However, the country with the most days of house confinement was Italy, which, without ever having to resort to strict

confinement, did so for 695 days. This country is followed by Fiji with 689 days of curfew and Gabon with 687 days. Both countries, like Italy, have also not resorted to the strictest level of confinement.

At the aggregate level, the average time spent in confinement worldwide was 271 days (as of April 13, 2022). However, in contrast to the countries mentioned above, there are others that stand out for not having had to resort to any type of home confinement to fight the pandemic. According to the Oxford database, seven countries have not made such recommendations. These include Tanzania, Iceland, Cameroon, Nicaragua and Niger.

Another element that has been key to the effectiveness of the measure, in addition to the degree of rigorousness, is the speed with which it has been implemented. The greater the speed with which mobility control measures were put in place, the easier it seems to have been to control the outbreak. At least it seems so if one looks at the infection curve of countries that had a rapid response such as South Korea versus the curve of countries that have had a slower response (Oxford database).

Research has found that containment has been a key measure to control the spread of infection (Lau et al., 2020; Pan et al., 2020; Jefferies et al., 2020). However, there is no clear consensus on whether the success of the measure is associated with the degree of imposed isolation applied. While there is research that concludes that a greater degree of confinement translates into greater effectiveness of the measure (Walker et al., 2020), there is other research that concludes that it is not necessary to reach a high level of rigorousness in its application in order to stop the chain of contagion. Block et al., (2020) through their prospective research, based on stochastic simulations, conclude that strategic social isolation measures would be sufficient to mitigate the disease without having to resort to total isolation. The results of the research by Haug et al., (2020) point in the same direction, indicating that the application of less restrictive non pharmaceutical interventions can be as effective as restrictive isolation measures.

Another element in assessing the effectiveness of the measure is the extent to which the benefits are distributed evenly across the population. Much research has shown that the disease has most adversely affected the most vulnerable people, such as people of low socioeconomic status and ethnic minorities (Kim and Bostwick 2020). The researcher Patel (2020) attributes this inequality in infection rates to different mechanisms such as greater domestic overcrowding or lower occupancy in jobs. In addition, people in worse economic conditions will be subjected to greater pressure and in many cases will be forced to skip the confinement measures in order to overcome their economic hardship, thus putting their health at risk.

An alternative measure to social isolation that has been noted for its effectiveness has been contagion tracing. Countries such as South Korea have invested heavily in this type of strategy, through medical records, video surveillance cameras and geolocation of mobile devices, achieving very good results (Han et al., 2020). Although this strategy is not free of conflicts and raises ethical challenges associated with the privacy of individuals.

Social Implications of the Lockdown

The strictness of the measure of home confinement has brought about a drastic change in peoples' usual ways of living. The fact that the mobility of the population of entire countries

was reduced to the confines of their homes inevitably had repercussions beyond strictly sanitary.

One of the effects that was felt most quickly was the decrease in the levels of pollution in the environment. The reduction in road traffic as well as restrictions on air mobility were noticeable in the decrease of greenhouse gases in the atmosphere (Le Quere et al., 2020; Venter et al., 2020). Although it must be understood that the decrease in pollution has been a circumstantial consequence of the punctual irruption of urban and international mobility, this improvement in environmental conditions will not last in the long term.

Unfortunately, the occasional improvement of environmental conditions and the benefits in limiting contagion are the only two benefits identified in the literature associated with confinement. On the contrary, a large body of research reports adverse effects on individuals.

The drastic change in people's routines and modes of living has had a general impact on sleep quality (Salfi et al., 2020). It has also been found that the measure is associated with a worsening of people's psychological well-being by increasing stress, depression or anxiety. These effects were more pronounced in relation to gender, age, being unemployed or being a student (Xiong et al., 2020).

Undoubtedly, one of the effects that has had the greatest impact at the political and social level has been the serious effect that the measure has had on the economy of the countries. The limitation of mobility has not only led to the disruption of a large part of the productive system, but has also greatly limited consumption. The research by Asahi et al., (2021) estimated that the implementation of confinement has led to a loss of between 10% and 15% of local economic activity and that a four-month duration of confinement represents an economic decline equivalent to the economic recession of 2009. According to research by Palomino, Rodriguez and Sebastian (2020), this effect on the economy has resulted in an increase in poverty and inequality among European countries. Other studies, while agreeing that the economic depression has resulted in the destruction of employment, the loss of purchasing power and access to basic resources such as food, differ in the idea of increased inequality (Wright, Steptoe, and Fancourt 2020). In any case, we must consider that the loss of purchasing power has qualitatively different effects depending on the socioeconomic stratum involved. Families close to the threshold of social exclusion will suffer more severe consequences than more affluent families in the face of the same economic loss.

Platt and Warkick (2020), in their research point out that in the UK's lockdown, certain ethnic groups, such as Pakistanis and Bangladeshis, were especially vulnerable because they were employed in particularly disadvantaged economic sectors. This was particularly acute for populations with lower availability of savings (Platt and Warwick 2020). Immigrants in many countries hold precarious jobs without legal recognition such as those associated with street vending, domestic service, agriculture, hospitality and prostitution (Mamadou et al., 2020). On the one hand, jobs such as hotel worker and catering or street vending have been hard hit by the measure. On the other hand, since they are carried out under irregular conditions, employees have not been able to avail themselves of financial assistance from the state. In addition, in cases where people continued to work under conditions of restricted mobility because they could not justify their movements, they had to pay administrative penalties (Mamadou et al., 2020).

In addition to these effects, there are other effects at the educational level that could lead to greater economic inequalities in the long term. Access to the Internet and the availability of quality technological resources have been essential for children and young people to continue

their education with maximum guarantees. In addition, there are other elements of a cultural nature that exacerbate inequality in the absence of schooling, such as the different use and access to libraries depending on the socioeconomic status of the family (Jæger and Blaabæk 2020).

The effects of confinement have also become apparent in terms of gender equality. The work of Linka (2020) finds that this measure has an implied decrease in domestic work and a consequent loss of leisure time for women. In addition, women have been more adversely affected in terms of work and wages during the pandemic (Kristal and Yaish 2020). The work of Sanchez et al., (2020) concludes that the lockdown has increased women's vulnerability to gender-based violence.

Conclusion

The research work consisted of the study of home confinement from different approaches in order to identify the strengths and weaknesses of the measure.

Confinement is a very old resource which has been applied throughout history with hardly any variations, regardless of the technical advances associated with the modernization process. Nowadays, such advances as vaccines and drugs are a great relief for mankind, but they do not exempt the need to apply non-drug measures such as social isolation. The development of the coronavirus vaccine was a historic milestone in terms of the speed with which it was developed and mass-produced, yet this was not achieved until several months after the outbreak reached a global magnitude.

The historical review has also served to realize that the imposed isolation measures have served as a mechanism of exclusion, especially for the most vulnerable sectors of society. And that their use has often been useless because they have not been adequate to the contagious mechanism of the disease in question. This fact highlights the importance that the containment strategy must be defined on the basis of accurate and robust knowledge about the disease and its contagious process and not on the basis of past experiences or unfounded beliefs.

Analysis of the measure for the current pandemic has shown that it has been widely employed worldwide, with considerable rigor and over a long period of time. There have been few exceptions of countries that have refused to use it. While it is true that the measure has been effective in greatly reducing the effect of the pandemic in terms of fatalities, some studies suggest that it would not have been necessary to implement rigorous containment with a more precise implementation of other non-pharmacological interventions. A key element compared to the strictness of isolation is the speed of response in imposing less restrictive social distancing. It also highlights the use of technical resources and the use of data as a tracking and tracing mechanism to achieve the quelling of the chains of contagion.

Despite the success of the measure at the health level and its occasional benefits on environmental health, it has had many adverse effects on the population. Such as the fact that the health benefits have not been distributed homogeneously among the population. The most socioeconomically vulnerable people also sustained a higher risk of infection under confinement conditions. Other adverse effects on mental health and purchasing power have been detected. For both dimensions, gender and socioeconomic status were found to be key

mediators in terms of level of impact. The worst affected were women and people with lower economic resources.

According to the results of the research, it is concluded that the measure of home confinement, despite having significant benefits, has had serious effects on citizens. Nevertheless, it remains a tool we still depend on to combat future infectious threats, as long as they are spread through face-to-face interaction. This implies that a refinement of the strategy is required in order to enjoy its benefits while minimizing its adverse effects to the greatest extent possible. This refinement could involve improving the speed of response based on internationally harmonized protocols and more effective warning systems. We must invest in strategies based on the control and tracking of cases in order to apply social distancing measures in a selective manner and not have to resort to mass confinement. Finally, safeguarding the health of vulnerable people is also a priority, not only as an effort for equality but also to ensure the safety of the entire population, as this is the only way to eradicate the outbreak.

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