

Health and health inequalities impact assessment for non-clinical measures to control COVID-19 in the Basque Country and Navarre (Spain)

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Abstract

This article describes the results of a health and health inequalities impact assessment of the COVID-19 pandemic control measures in the regions of the Basque Country and Navarre in Spain. A literature review was conducted on Pubmed and Web of Science (WoS) databases, in addition to individual semi-structured interviews and focus groups with experts, key informants and different profiles of citizens. A wide variety of social determinants of health have been affected by the measures, which included individual health-related behaviors, service disruption in formal care, educational settings, and health care provision. These changes have particularly affected certain population groups including children and adolescents, older people, those with health conditions and disabilities together with caregivers, women, as well as people with low levels of education, income, and resources. In future scenarios it will be necessary to pay attention to the potential impacts of policy responses on health inequalities to avoid an increase in existing health gaps.

Keywords

Health impact assessment, health inequalities, social determinants of health, policies, COVID-19

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Background

The wide-ranging health and non-health measures adopted to control the COVID-19 pandemic are likely to affect individuals' and populations' health—both physical and mental—and well-being as considerable direct and indirect impacts on the social determinants of health (SDH).^{1–5} Moreover, the lack of an equity perspective in the design and implementation of these measures has contributed to increasing existing health inequalities.⁶ The complexity and the extent of measures adopted in the context of a major emergency event such as the COVID-19 have made it difficult to analyze their impacts across a wide range of SDH and population groups, especially in the first months of the pandemic. It is therefore essential to conduct new studies integrating this wider approach to comprehensively assess these impacts on populations' health and wellbeing and to inform decision-making in current or future pandemics.

Health Impact Assessment (HIA) is a systematic process that uses an array of analytic methods and data sources

and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population.⁷ Based on the SDH model⁸ it is presented as a decision-informing tool providing a specific vehicle for the consideration of health and

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well-being in a systematic way.⁹ While HIA is mainly promoted as a prospective tool, used retrospectively, it helps to better understand the consequences of a policy decision once it has been- or is being-implemented and it provides new evidence informing future policy and decision-making processes.^{7,10}

This approach have proved particularly relevant in emergency events such as the COVID-19 pandemic, as reflected by the series of HIAs conducted by the Wales Health Impact Assessment Support Unit (WHIASU) and with a focus on health and health equity impacts of home confinement, housing and spatial planning policies on the Welsh population.^{10–13} These HIAs were aimed to learn from the experience and assist decision-makers so that potential inequalities and adverse impacts of their decisions could be reduced and opportunities for health and health equity maximized in future decisions during and post the pandemic.

This paper uses this same approach and focuses on the results of a HIA retrospectively applied to a set of policy measures implemented in the first waves of the COVID-19 pandemic, in the regions of the Basque Country and Navarre, two of the Spanish regions most affected by the pandemic as revealed by reported cases of infections, hospital admissions and deaths attributed to the disease, all of them above the national average.¹⁴

As elsewhere in Spain, since the first COVID-19 cases were reported in March 2020, a series of non-clinical measures were introduced in these two regions to contain the transmission of the virus. These included home confinement, restrictions on mobility, suspension of economic activity of sectors classed as non-essential, closure of schools and educational centers, and restrictions in formal care services and health care. Weeks later, at the beginning of May 2020, the so-called “de-escalation” process began with the gradual return to normal daily life and economic activity, even though containment measures continued to some extent throughout the subsequent waves accordingly to the evolution of the pandemic.

The purpose of this paper is to add new evidence on the consequences of non-clinical measures in response to the COVID-19 pandemic on population health as well as their differential impacts on diverse social groups accordingly to the SDH particularly affected in these two regions in Spain. More precisely, the range of measures selected for analysis were selected in the screening phase of the HIA and included (1) Home confinement and reduced mobility; (2) Restrictions on formal care services; (3) Restrictions on leisure and social participation opportunities; (4) Restrictions on formal education; (5) Regulation of work environment and employment activities; (6) Reorganization of health care services.

This paper presents and discusses the main results obtained in the appraisal stage of the HIA when health impacts are identified and characterized relying on

published evidence, professional expertise, and local knowledge. Its ultimate goal is to provide specific evidence on health and health inequality impacts of containment measures in the two regions and to inform and support policy making in the recovery phases and in future pandemic crises to avoid unexpected harms to promote health equity.

Design and methods

The collection of evidence to inform the appraisal stage of the HIA included a literature review and a qualitative study.

First, a qualitative study was conducted aimed to identify and characterize the wider health and wellbeing impacts of the analyzed measures from a local perspective and with a particular emphasis in exploring complex contextual factors emerging from the data.

Data collection combined individual interviews with key informants (experts, professionals, and decision makers) and focus groups with different profiles of citizens and members of community associations in the regions of the Basque Country and Navarre (Table 1). The purpose of the interviews was to collect participants' views based on their expert knowledge and work experience related to the analyzed policy measures and concerned SDH. The focus groups were aimed at exploring citizens and associations' experiences and view as members of different social groups, specially affected by the pandemic measures. Interviewees were contacted by telephone and e-mail via the research team professional networks. Focus groups participants were identified by asking key informants to assist researchers in identifying them and then using the snowball technique. Ten individual interviews and 10 focus groups involving 63 participants were conducted.

Interviews and focus groups were conducted in Spanish guided by one (interviews) or two (focus groups) researchers trained in qualitative techniques, following a semi-structured script adapted to the participants' profiles and following the study objectives (Supplemental material 1). The fieldwork was carried out between the months of July 2020 and April 2021. All the participants received an information document outlining the aims of the study, which they signed in order to give written consent for their participation, as well as the recording and processing of the data collected. The study was approved by the Ethics Committee of the University of the Basque Country (no. M10_2020_264). A thematic analysis¹⁵ was carried out on collected data, contrasting the main evolving topics with the conceptual framework of reference.

Second, a scoping review was conducted to gather and summarize cumulated international evidence on the health impacts of non-clinical measures implemented at the beginning of the COVID-19 pandemic. Search was carried out in Pubmed and WoS databases and results were

Table 1. Participants in semi-structured interviews and focus groups.

Data collection technique	Number of groups (participants)	Code used
Focus groups	10 (63)	
Neighborhood associations	2 (8 and 5)	FG NAso
People over 60 years of age/People over 65 years of age in a situation of fragility or vulnerability	2 (6 and 6)	FG older
Parents or guardians with dependent minors	2 (7 and 6)	FG parents
Young people aged 19–25	2 (6 and 9)	FG young
Women workers in essential services with care work in the household	2 (6 and 4)	FG women
Individual semi-structured interviews (10)		
Field	Code used	
Social services and social policy	INT SS&SP	
Gender	INT gender	
Education	INT education	
Social economy and solidarity	INT social economy	
Rural area	INT rural	
Disabled people's associations	INT disabled	
Social services in public administration	INT social workers	
Mental health and addictions in vulnerable groups	INT MH and addictions	
Immigration	INT immigration	
Poverty and social exclusion	INT poverty	

completed with gray literatures including reports from academic sources and public institutions published in the Spanish context.

The literature review was carried out based on the main pandemic control measures identified in the screening phase of the HIA, and ranged according to the SDH model proposed by the Commission to reduce Social Inequalities in Health in Spain.⁸ The search strategy included a combination of terms for capturing evidence on: (1) the different measures introduced in response to the COVID-19 pandemic; and (2) the population groups affected accordingly to the differential impacts on the SDH (Supplemental material 2).

The inclusion criteria for selecting articles were as follows: (1) original studies, reviews and meta-analyses; (2) studies conducted in the context of the COVID-19 pandemic addressing the impact of COVID-19 management and control measures; (3) published between January 2020 until 18 May 2021; and (4) written in English, Spanish or French. Handsearching of reference lists and other relevant articles was also conducted. Studies on health impacts in countries with epidemiological or political contexts far removed from the Spanish reality, as well as, conference abstracts, non-original studies, and clinical and epidemiological studies were excluded from the review.

The study selection process was carried out in two phases. Firstly, the title and abstract were screened and secondly, the full text was read. Two reviewers participated in the process and selected the references in accordance with the inclusion and exclusion criteria. If they were unable to agree, a third reviewer was consulted. Data

extraction was conducted based on the following elements: type of measure analyzed, health indicator or SDH concerned, impact on specific social groups, and geographical context. The main findings were summarized in narrative form.

Results

Results are presented accordingly to the six blocks of measures structuring the analysis of the collected information. The literature search identified 3,381 potentially relevant citations. After removing duplicates, 256 articles were included for review (Figure 1).

The analysis presented below synthesizes both, the main findings extracted from the new qualitative information and the literature review. Additional quotations from interviews and focus groups are included in Supplemental Material 3. Results are presented according to the six blocks of measures structuring the impact analysis.

Home confinement and reduced mobility

The type and level of impact on mental, emotional, and physical health varied according to different social groups.

Mental health impact. According to the group of mothers and fathers, children's health was affected mainly in terms of mental, emotional and, relational and physical health. During the lockdowns more noticeable feelings of sadness, anger and frustration, and of missing other people were reported.

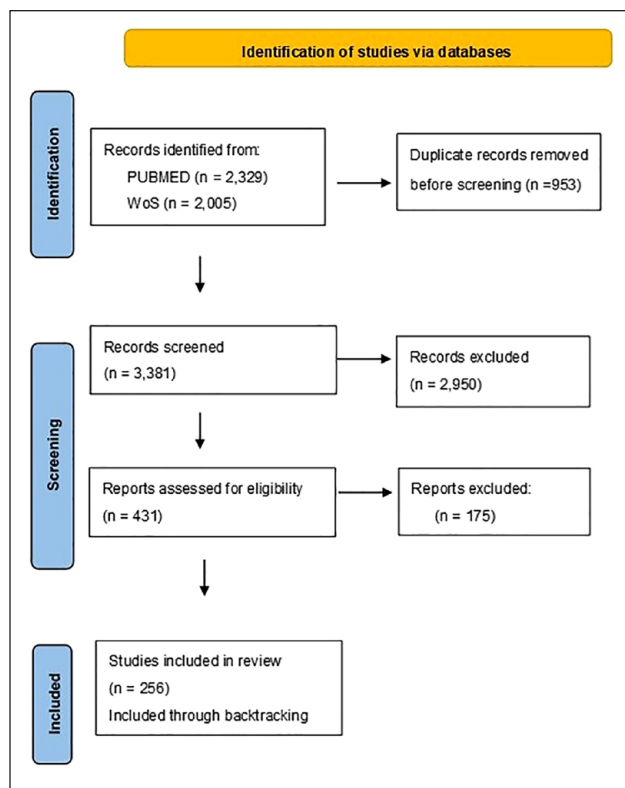


Figure 1. Flow diagram of the literature review and included articles.

Source: Elaborated by authors, based on the PRISMA 2020 flow diagram.

“Two months without going out in the street, that has been a shock for them, they got used to it (. . .) not being able to socialize with other children and not being able to learn, discover, advance, that’s what may have been missing in their quality of life” (FG parents).

“At the beginning it was fine but then, after two or three weeks, he would arrive at night and start to say that he was sad because he missed his friends (. . .) (FG parents).

As for adolescents and young people, confinement has also affected them in a particular way. In a vital stage, in which the importance of contact with friends or peers increases, the confinement in the family context may have supposed an unfavorable scenario for adolescents. Participants in the FG expressed the effects of confinement on their physical and mental health, intensified by the technological connection.

“(. . .) not being able to leave the house, that feeling of lack of freedom, of not being able to lead a normal life, well, in a certain way it did generate a certain depression in me, sometimes anxiety of saying when is this going to end, because I can’t” (FG young).

“Above all, what I have noticed the most has been the mental exhaustion, because it is 12 hours in front of the computer, studying or talking, (. . .) having that feeling of not disconnecting at any time (. . .)” (FG young).

The effects on the physical health and psychological discomfort of adults above 60 years old, consisted in the restriction of many of the activities they carried out on a day-to-day basis. Although for some of them it was an opportunity to recover personal time or regain certain social contacts, many reported that it had meant a major change in the organization of their time.

“I am 85 years old and I live alone. Imagine how I was at home, for all long days, talking to the walls alone. And I lived through it with an impressive amount of courage.” (FG elderly)

“(. . .) the one who had a bicycle, would go for scary rides. The one who was physically well, went to the mountain (. . .). But those of us who needed a chair to get from here to there, it turned out that we didn’t do any activity at all” (FG elderly).

“On a personal level, it has been very good for me to be at home, to do things at home that I never had time to do. It is fine to do physical exercise from that point of view (. . .)” (FG elderly).

Results from the literature review also show that difficulties in maintaining interpersonal relationships and supportive health behaviors have led to increased symptoms of stress, depression, anxiety, irritability, fear and insomnia, among others.^{16–32} Loneliness, a perceived lack of social support and security, along with financial worries and constant media exposure to news about the pandemic have exacerbated these symptoms.^{33–35}

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“I then had insomnia, nightmares, I did not sleep well. In fact, I still find it hard to sleep at night and I am afraid of going through another confinement” (FG parents).

Children and adolescents, older people and those with health conditions and disabilities, together with caregivers, as well as women and people with low levels of education, income and resources have been the most affected population groups in other settings also.^{16,36–41}

Caregivers have expressed their discomfort due to the overload of care that caring in the pandemic situation and in the context of the imposed restrictions has entailed.

“(. . .) everything came together, especially the Covid, the stress, having to take care of . . . , all those little things. And all that plus not being able to go out, it was terrible” (FG women).

“Who takes care of my children? Where is the family reconciliation? Well, I had to give up my salary for two months in order to take care of my children while they were at home because they had no school” (FG women).

People infected with COVID-19 and those close to them have also reported symptoms of emotional stress and anxiety,⁴² in addition to difficulties of grieving the loss of a loved one due to restrictions to meeting and accompanying.

“My father finally passed away on March 31 and well. . . he had been hospitalized for a month when they let me visit him, but it got to a point where we were no longer allowed visits and it was very painful (. . .)” (FG NAso).

Impacts on health-related behaviors. Most studies evidenced how being female, young and having a higher body mass index is associated with a worsening of eating behaviors, physical activity, and alcohol consumption.^{43,44} Besides, the risk of exposure to tobacco smoke, noise and screen time has increased among children from families with lower levels of education and facing difficulties to make ends meet.^{45–48}

Interviewers have reported an increase in tobacco consumption, in addition to other substances such as cannabis or cocaine. Difficulties in selling them in the usual markets together with their scarcity, have increased adulteration practices, that, in the case of cannabis, have led to more psychiatric decompensations. In addition, there have also been reports of increased consumption and sale of drugs and anxiolytics on the black market, according to key informants working with vulnerable people with addiction problems and psychiatric comorbidities.

In the qualitative part of the study, no important changes and impacts on physical activity have been reported. However, in the literature review, physical activity has been shown to be one of the most strongly affected health-related habits, with a generalized reduction in physical activity levels and an increase in sedentary behavior^{24,45,46,49–61} The impact of inactivity would have been more important in lower socio-economic groups.^{62,63} Regular exercise during periods of confinement has been shown to have a buffering effect on the adverse impact of reduced mobility on both physical and mental health.^{64,65}

Household isolation has also adversely impacted people's sleep routines.⁵¹ Young people and essential workers

have primarily reported changes in their sleep, even needing medication to be able to sleep.

“Above all, what I noticed the most was the mental exhaustion, because there are 12 hours in front of the computer; studying (. . .) as a result of that, I counted on sleeping and some days I was able to sleep 5 hours a day” (FG young).

“I started sleeping medication in April, I was the last one at my job to start taking sleeping medication, at my job we were all on medication to get to sleep” (FG women).

“I then had insomnia, nightmares, I did not sleep well. In fact, I still find it hard to sleep at night and I am afraid of going through another confinement” (FG parents).

In the literature though contradictory results, regarding sleep routines, have been found.^{23,24,58} Similarly, prolonged screen time in different age groups is reported to have had a detrimental effect on eye vision and emotional well-being.

“It has affected me negatively. (. . .) I was with screens all day and my eyesight worsened, I had to get new glasses.” (FG elderly)

Impacts on family relationships and gender violence. Interviewed key informants have reported on an increased risk of exposure to domestic and gender violence in the confinement, which has actually make these situations less visible less detected and therefore, less likely to receive help from the outside. Published literature in other countries show the same results.^{66–68}

“We have detected that there was a very important halt in the number of reported cases of violence during the first 15 days of COVID-19, associated with the fear of thinking ‘where am I going to be better; I am not going to go to a shelter’, I mean, with the possibility of getting infected, while a strong increase was registered later on, once de-escalation was launched” (INT gender).

Nevertheless, some interviews show diverging results. Some interviewees pointed to the fact that certain aspects of family coexistence improved during confinements, notably among young couples. On the contrary, other interviewees reported that family discussions had increased, mainly due to the tension caused by the pandemic.

“(. . .) confinement has been very good for all of us to support each other much more at the family level” (FG young).

“(. . .) very difficult psychologically for everyone, back to schedule, and now the relationships already damaged by the fact of having been locked up (. . .)” (FG parents).

In the literature, it appears that an increase in the time spent at home would have worsen family relationships without necessarily involving domestic violence.^{57,69,70}

Restrictions on formal care services

Restrictions imposed on formal care services and facilities (nursing homes, occupational centers, home care services, day care centers, schools) have had a detrimental impact on the wellbeing of users, informal carers and residential care workers. Anxiety, distress and fear of contagion have been reported among the latter.

Besides, according to interviewees measures to contain the entry and transmission of the virus in residences could have triggered negative effects on feelings of loneliness and isolation. In this line, some key informants have pointed to future considerations to avoid this harm.

“(. . .) things have to be reviewed, within the residences: how to organise the isolation in order to be efficient, to make it compatible to avoid infection and not to be killed by loneliness” (INT social worker).

These results are consistent with published studies showing increased social isolation of older people, which may have led to mental deterioration, including problems of disorientation, agitation, and depression.^{71,72}

The largest impacts among people with mental health problems and disabilities, and disadvantaged groups at risk of social exclusion, has been related to deprived access to caregivers, restrictions of social relationships, and disruption of their daily routines.⁷³ This has also led to reconciliation issues amongst carers.

“(. . .) there is a group, within these profiles that live at home and if before they had some support and activities, (. . .) they went to a day centre, or an occupational workshop. Now this supposes reconciliation problems, because those who care for them have to take care of them much more intensely” (INT social worker).

The intensification of the care burden, together with the pre-existing gender gap within this domain has added new workload to family and informal caregivers and led to symptoms of stress, burnout and exhaustion.⁷⁴⁻⁷⁹

“Being with my baby girl, I had to study until 10 at night, to wake up at 5:45 to do the laundry and to have time to do I don't know what else, to cook lentils at 11 p.m. to end up at how knows when. It was a chaos. (. . .) Suddenly a meeting of whatever who knows at 14.00 while I say to myself “I have to prepare food for my children”. With my tongue hanging out. It was a before and after for me on an emotional level, it was terrible” (FG women).

Migrant women caregivers and live-in workers have experienced increased anxiety due to imposed obligation to stay in the employers' homes during confinement.⁸⁰

People with higher socio-economic status have enjoyed greater opportunities because they could bear the financial

cost of private care services and the suspended therapies for people with various disabilities.

“(. . .) others have been locked up with the people they cared for and without being able to move from there and, on top of that, with imposed limitations(. . .)” (INT immigration).

“To me everything I have to do doesn't seem bad because we have no other choice, but many family units, in my house we need two salaries and what do you do with them (children)” (FG parents).

The emergence of community and neighborhood solidarity networks, together with an intensification of family networks, had a buffer effect, especially among older people living alone and vulnerable groups with lower socio-economic status and greater needs, by providing emotional support and material resources.^{81,82}

“In other neighbourhoods there has been total coordination between the associations, the young people, the neighbourhood unit, the municipal police, the Red Cross, everything. Coordination has been constant and so has the telephonic support, the families called them every often, there was always a referral, so there have always been problems, so I was the one who centralised the problems and redirected them to the support network or the neighbourhood network” (FG NAso).

Restrictions on formal education

The closure of schools and educational centers has had direct and indirect adverse consequences on the physical, mental, and social health of children and their families,⁸³ affecting disproportionately those at the lower socio-economic levels.^{84,85}

In the qualitative interviews of the study with the expert in the field of education, it was pointed out that the fact that educational centers were not considered as essential services, either in their educational or in their care dimension, was an affront to the right to education.

In this sense, literature review has also shown similar disruptions in schools and school-related social and child therapy services, which has led to higher risks of food insecurity, domestic violence, and learning process deficit, as well as a decrease in physical activity, and peer relationships.⁸⁶ Mental health problems and aggressive behavior have also been observed, particularly among adolescents.⁸⁷

University students have reported higher levels of stress due to a heavier study load, longer hours of homework, difficulties in switching off, and problems in maintaining a balance between educational responsibilities and other household obligations.⁸⁸

Online learning may have increased social and health inequalities, due to the unequal availability of technological

resources, adequate study spaces, and the support facilitated by schools and teachers.⁶⁹

“(. . .) single women or families with children under their care, all of a sudden at home, without connectivity, with precarious housing conditions, with few skills of fathers and mothers, especially single mothers, to accompany the children, in what was the madness” (INT poverty).

Furthermore, school closures have also had a major impact on the wellbeing of families, being considered a stressor due to the need to reconcile it with other tasks, such as teleworking.

“(. . .) at school it's OK, but at home with the parents (. . .) my daughter; she doesn't do her homework alone for 4 hours. Of course, we have gone through a thousand emotions” (FG parents).

“The feeling of not doing anything right, not my job, not being able to work, not being able to take good care of my daughter (. . .)” (FG women).

Regulation of work environment and employment activities

The possibility of teleworking has not been equally distributed between sectors or people with different socioeconomic status, being teleworking mainly the option for people with a university degree rather than for less educated people.^{85,89,90} Nevertheless, this new way of working has made it difficult to switch off from work and to combine working hours with domestic tasks, with a burden that disproportionately falls on women.^{91–93}

Self-employed women have been particularly affected due to the lack of economic protection, instability and uncertainty surrounding their activity.

“For me the main problem is that I have been forced to take a leave of absence that in normal conditions would not have happened and it has been because of reconciliation issues (. . .)” (FG parents).

“Of course, it's not the same for me, for example, as a self-employed person, in the end, what I do is not work, and that goes to reduce my income, my contribution, my everything. . . .” (FG NAso)

Studies have also shown an increase in sedentary hours related to telework.⁹⁴

Workers in essential services, mainly women, have been exposed to greater work pressure, higher risk of contagion and higher mortality rates. Health workers have reported more situations of stress, anxiety, depression and fear of contagion, and those in social services higher levels of burnout and emotional distress.

“(. . .) I lost 5 kilos, in 3 months, I went back to smoking. (. . .) I hadn't smoked for almost a year and a half. (. . .) I could not change the chip at night, I slept with work in my head. Tired, more than physically, an emotional tiredness that made me physically tired” (FG women).

Economic restrictions have led to increased rates of unemployment and job insecurity. The groups most affected include women, mainly racialized, young people and people over 55, people of low socio-economic status, and the self-employed. Job insecurity has been associated with higher levels of stress, depression, and anxiety. Loss of income, because of unemployment or reduced hours worked, has in turn affected material living conditions.^{95,96}

“(. . .) on a physical level I haven't noticed much difference, but on a psychological level yes. It has been a stress to go to work every day, to work in a supermarket where people don't respect anything, where we had no measures when we started. (. . .) I have even gone to work with tachycardia” (FG women).

Young people have also reported concern about job losses and incognita situations.

“In my case, when all this news about unemployment started. . . well, apart from the pandemic, they were saying that a new economic crisis was coming. (. . .) the truth is that I have a lot of questions about employment” (FG young).

Restrictions on leisure and social participation opportunities

Closure of leisure and cultural centers as well as daycare centers has mainly affected the elderly, people living alone and the adolescent population.⁹⁷ The former have reported on the negative effects on their emotional well-being due to the impossibility of giving hugs, meeting people close to them and socializing in general.

“(. . .) not being able to give kisses, not being able to give hugs, not being able to see my family, my friends, my nephew, (. . .) that has meant a lot to me” (FG elderly).

In addition to social isolation, the COVID-19 restrictions have also increased feeling of fear and anxiety, mainly among the elderly. The qualitative study has revealed their threat of being infected by family members, knowing that they were a vulnerable group in the face of COVID-19, a feeling that has been amplified as a result of exchanges within their social circles and information diffused by the media.

“the issue of vulnerability (. . .) to think that until there is no vaccine you are a risk factor; (. . .) a feeling of fragility and some very negative feeling” (FG elderly).

At the same time, elderly people have found material and emotional support in neighborhood networks. Technologies have also made possible for both, older and younger people, to maintain contact and social networks. Nevertheless, a digital divide across age and socioeconomic groups has also been revealed.

“I was asked by older people when will we open to talk. Just to talk. It doesn't matter if one was one meter away from the other, but just to talk” (FG NAso).

“The neighborhood network has been the main support network, we check on each other's purchases and if necessary. Then there is also the fact that we all know each other (. . .)” (FG young)

“Confinement has shown us that we seniors have a digital divide (. . .)” (FG elderly).

Reorganization of health care services

Restrictions in the healthcare provision have led to rescheduling and cancelation of appointments, making it more difficult to access certain hospital consultations and increasing waiting lists with consequent delays in diagnosis, treatment and follow-up of diseases and conditions.^{98–100} Barriers to accessing health services have also decreased access to preventive programs and services.^{101–103}

“I think that it is also not referred, from what I have experienced with two specialists, it is not referred to the specialists as it would have been referred before. It seems that the only thing more important, I have the feeling, is related to the COVID or something like that, and if not, they kind of relegate you” (FG parents).

Difficulties in accessing health care have had a greater impact in terms of equity and quality of care for certain groups. People with physical disabilities have been particularly affected by the lack of physiotherapy services and hospital transport services.^{104,105} People with chronic diseases have reported increased difficulty in accessing care due to the lack of telephone contact and reported visits to the health centers for fear of contagion. Perinatal and pediatric care users have experienced a reduction in the number of routine consultations, restrictions on accompaniment, and on epidural anesthesia access, among others.^{106,107} In addition, there has been a decrease in the number of consultations among undocumented migrants due to difficulties to renew their residence permits.

“We have encountered problems from something as silly as getting a registration form or doing the registration procedure that has become impossible. (. . .) in turn has hindered the completion of other procedures. This has meant that some people have not been able to get health care” (INT immigration).

Telemedicine has shown positive results in terms of convenience, privacy and timesaving in certain cases and for certain population groups.^{108–110} However, a loss of quality care has been also reported, probably associated to the digital divide^{111–114} and the impossibility of in-person relationship and physical examination.

“I understand that they have done it (. . .). Because we were waiting to see if all this would be over, as if it would be over quickly. (. . .) But the contact, which I think is so important at the health level, the phone calls, 30 calls during the day, and not to see, the eyes, to look, to see. Because sometimes it is not words that are needed only. . . .” (FG elderly).

“Because for example, what happens with people who don't speak the language? In the case of my mother, I'm the one who is getting it now that it's all online, everything goes with appointments. Nobody is calling me (. . .)” (FG women).

Discussion

The literature review and the new qualitative evidence collected in the two regions targeted by our study have shown the impact on health and health inequalities of the policy responses to control and manage the COVID-19 pandemic, with a special emphasis on vulnerable population groups.

In accordance with results reported elsewhere, our qualitative results show immediate adverse effects concerned mental health and wellbeing, particularly among women and essential workers,¹¹⁵ elderly, and young adults.¹¹⁶ Consistent with other studies our results also indicate that underrepresented minorities with lower household incomes and informal caregivers were also particularly at risk of experiencing negative health outcomes.¹¹⁷

This study has also evidenced the negative impact of COVID-19 lockdown and social isolation on the elderly, especially in terms of cognitive deterioration, as mentioned by others.¹¹⁸ However, some authors have also shown that some older adults are not experiencing increased negative mental health consequences similar to or greater than those faced during the first few months of the COVID-19 pandemic.¹¹⁹ At the same time, spending more time at home have led to a greater risk for some women, children and young people, due to a domestic violence exacerbation during the pandemic and the limited access to support networks and facilities. These results are consistent with other impact assessment reports.¹²

With respect to school closures, our results are also in line with studies concluding that this measure could not only adversely impact educational outcomes but also disproportionately affect children benefiting from school breakfasts and lunches and whose access to some health services could be also limited.¹²⁰

This study has also highlighted the adverse effects of policy measures related to employment conditions and work environment, notably among women, mainly

racialized, young people and those over 55, people of low socio-economic status, and the self-employed largely suffering from job insecurity and unemployment. Some studies have stated that previous situations of poverty, precarious employment and housing coupled with difficulties in accessing health services and other basic benefits have particularly exposed certain categories of the population,^{12,116,121} as well as those living in economically deprived areas^{122,123} to the risk of contagion and to other adverse effects of the pandemic. Other unequal impacts have been reported among people with physical disabilities, chronic illnesses, women and immigrant population groups. Finally, in contrast with these adverse effects, some positive developments have been documented in terms of householders, neighbors, and communities coming together to support one another and particularly vulnerable groups, older people, and homeless shelters in line with international organization's warning messages.¹²⁴

We recognize that this study has some limitations. First, in the scoping review only two databases were used for the search, while the inclusion of other dataset would provide more literature. However, we considered that the two selected databases, Pubmed and Wos, cover a wide range of knowledge fields especially of the interest of the topic studied, and to do a systematic review was out of our interest. Second, the search period covers only the initial stages of the pandemic. Although a few months have passed since the end of the search, the results of the scoping review respond to its objectives of complementing the evidence obtained from the qualitative study during these phases of the pandemic. Nevertheless, we admit that some studies focusing on the first months of the pandemic might have been published in the last year. Third, the qualitative study was carried out in two specific regions inside a country, and its results can be interpreted mainly in that context. However, qualitative studies are intrinsically local and need a narrow geographic context to carry them out. Similar measures have been adopted in a wide variety of geographic contexts, thus the impacts identified in the Basque Country and Navarre could serve as a starting and comparison point for other similar regions.

The HIA approach used in this study has allowed a systematic process to identify, analyze and appraise the wide-ranging consequences of the major policy measures in response to the COVID-19 on population health, wellbeing and health inequalities. Other studies have also highlighted the benefit that HIA can bring in emphasizing impacts, which can inform policy and shared learning with others.¹⁰ However, publications to date have mainly focused on the epidemiological impacts of the pandemic in relation to transmission rates, morbidity, and mortality,¹²⁵ as well as on the economic impact¹²⁶ and the effectiveness of different non-pharmaceutical interventions^{127–129} to

mitigate the spread of the virus. An adaptation of WHO's SDH framework to the specifics of the COVID-19 context has contributed to better understand the complex health and health inequalities impacts of the pandemic.¹³⁰ However, there is a need to conduct further research incorporating a broader SDH approach to better capture the larger and unequal consequences of the pandemic across populations.

Moreover, it should be noted in that non-clinical measures are highly dependent on contextual factors, and they have been implemented to varying degrees across countries in the context of the COVID-19 pandemic. Future research could be carried out in other contexts to complement the results of this study and to identify specific aspects and impacts in other territories with culturally, demographically and socio-economically different realities. It also deserves to be mentioned that this HIA has only covered containment measures introduced in the first months of the pandemic. This reveals the interest of further exploring the impact of measures introduced in later stages of the pandemic and their cumulative effect on population health, wellbeing and health inequalities. This new knowledge would to better adapt new decisions accordingly to the evolution of the pandemic and the most up-to-date evidence.

Significance for public health

This paper has contributed to this gap by integrating a SDH lens to the analysis of such consequences and by providing new qualitative evidence on the experiences and feelings of different population groups in two Spanish regions. In addition and, as pointed by other authors,¹⁰ this study results can contribute to raising awareness and better understanding of the wider health impacts of measures implemented at speed in a global pandemic such as the COVID-19, as well as to prospectively guide decision makers in their role to protect population health in similar crisis in the future. And this, with a particular emphasis on the differential nature of impacts on specific groups and the need to address any inequalities created or exacerbated in such emergency events.

Conclusions

The policies adopted to curb the spread of the COVID-19 virus have had direct and indirect impacts on a wide range of SDH that have negatively affected a wide range of health indicators and wellbeing. Moreover, these impacts have been unequally distributed across social groups as a result of a lack of an equity perspective when designing and implementing the policy measures. These unequal and negative health consequences need to be systematically

addressed in future decision making to prevent an unintended increase of COVID-19-related adverse consequences on health and health inequalities.

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Supplemental material

Supplemental material for this article is available online.

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