

# The emergent inequities and inequalities resulting from lockdown and social distancing measures taken to stop the spread of the COVID-19 pandemic within a Maltese scenario

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## Abstract

The COVID-19 measures of lockdowns and social distancing impact the wellbeing of different groups of people across populations, even in small countries such as Malta that enjoys free health care. This paper uses a mixed method approach to explore which aspects of the social determinants of health created new inequities and inequalities amongst the Maltese inhabitants during the first wave of the COVID-19 period; it determines who the groups of people mostly being affected by the pandemic measures are; explores the complexity of experiences during the partial lockdown measures; determines which neighbourhood contextual environments are likely to cause harm to people's wellbeing; and understands the effect of the social distancing measures within a cultural context of outdoor social interaction. Age, gender and neighbourhood landscape environment are significant determinants of the experience of COVID-19 measures. Yet, when looking in depth it became evident that the personality, marital status, housing type, family environment, employment type and conditions, access to social media, contextual social norms and neighbourhood contexts of individuals determined the experienced inequities and inequalities, in complex ways. It emerged that these aspects experienced during the pandemic highly determined the wellbeing of different groups of people.

**Keywords:** *Social Determinants of Health, SDH, Inequities, Inequalities, Malta, Therapeutic Landscapes, Health and Wellbeing*

## Introduction

The COVID-19 pandemic and the restrictions related to it are causing drastic changes and disruptions to all populations across the world, altering the way communities and societies operate, putting clinically vulnerable people at high risk and limiting social activities that impinge on aspects that were enabling people to improve their wellbeing. Due to the fear of the virus' contagion, people's mental health and wellbeing

have also been highly affected. This paper recognises that those experiencing pre-existing inequalities before the pandemic are now more vulnerable and at risk to mental ill-health. However, this study, using the case of Malta, aims to focus more on how the COVID-19 pandemic related measures aiming to stop the spread of the virus can have effects on the health and wellbeing of people too. These new groups of individuals may start experiencing inequities and inequalities in relation to the social determinants of health and thus the secondary effects of the pandemic may create lifecourse consequences on the mental and physical health of these groups of people.

The World Health Organisation (WHO), in their review on the 'Social determinants and health divide' (2008) within the European regions, drew attention to the need of taking a lifecourse approach towards health and wellbeing. This is important as it recognises that the setbacks experienced by people at a given point in time such as the COVID-19 pandemic are likely to remain or accumulate across an individual's lifetime. Health and wellbeing across the life course of a person are determined by the economic, environmental, social conditions of where one is born, grows up, works and lives (Dahlgren, Whitehead 2007, World Health Organisation 2015). Across history, sudden economic shocks such as the Global Financial Crisis of 2008, the collapse of communism and the Great Depression have led to an increase in morbidity, mental ill-health, alcohol and substance abuse and suicide rates amongst disadvantaged groups (Corcoran et al. 2015). Therefore, understanding the experiences of the effects of the measures taken during this COVID-19 can help policy makers and researchers to better address the emerging inequities and inequalities amongst these new groups of people and the effects of negative experiences on their wellbeing.

Studies including Coronini-Cronberg et al. (2020), Gauthier et al. (2021), Chakrabati et al. (2021), Whitehead et al. (2021) and Burström and Tao (2020), have analysed how much the pandemic is likely to create augmented negative health effects on individuals who were already experiencing inequalities and inequities before the pandemic. People living in disadvantaged neighbourhood conditions are at risk of experiencing chronic material and psychosocial stress which also lead to immunosuppression (Segerstrom, Miller 2004). These people are also more likely to experience underlying critical conditions such as hypertension, obesity, diabetes and lung problems due to smoking (Bambra 2016) which, with COVID-19, are considered as risk factors to severe ill-health conditions or mortality. Those individuals living in poorly maintained areas even if they may not suffer from underlying health conditions are vulnerable to contract the virus due to poor housing conditions, hazardous employment, repetitive or low-income jobs, and little access to adequate professional healthcare (Whitehead et al. 2016, Bambra et al. 2020).

Other studies such as Bavli et al. (2020), Fortier (2020), Warren and Bordolio (2020), and Mc Quaed et al. (2021) have emphasised that measures taken in relation to the spread of the pandemic may put some groups of people at risk of mental health problems. Bavli et al. (2020) call for the need of studying the effects of the measures and interventions taken and their unintended negative impacts

on health and wellbeing. They also highlighted that authorities within the context of the US have politicised this pandemic and have disregarded the serious effects these limitations may have on health. Warren and Bordolio (2020) also emphasise the need to understand how the pandemic has exacerbated certain inequities and how this is impacting on people's wellbeing. Mc Quaid et al. (2021) explore who is most likely to experience feelings of loneliness within a Canadian context where it emerged that loneliness is experienced mostly by those with low annual income and young female adults. In her study, Frontier (2021) furthermore stressed that women are negatively and disproportionately being affected by the COVID-19 due to their employment conditions and marital status.

Yet, to our knowledge, none of these studies have analysed the multiple, in-depth experiences of how the measures taken to stop the spread of the pandemic are related to the various social determinants of health, and how they are impacting people's wellbeing. Furthermore, the local neighbourhood context and the presence or the lack of therapeutic landscapes in the neighbourhood have been rarely looked at as determinants of people's wellbeing during these lockdown periods of the pandemic.

Research on the wider and social determinants of health within a local Maltese context (with the exception of Deguara et al. (2017) and Satariano and Curtis (2018)) together with research on inequality and inequity in Malta is limited. Georgakopoulos (2019) pointed this out in his analysis on what determines inequality in Malta and it emerged that although income inequality is slightly on the rise, wealth is a stronger determinant of inequality. Indeed, residential home ownership is the aspect mostly equalising wealth while self-employment is the aspect mostly creating income inequality. Age, education and inheritance may also be considered as determinants of inequality. In another study Betti et al. (2015) mapped economic poverty and inequality amongst children of different age groups. This is the only study that analyses inequality at a localised level. When the authors stratified the data according to children of different groups it emerged that inequality is not experienced consistently among children of different age groups within the same localities. This indicates that the experiences of income inequality of the Maltese children are highly variable across families and across different localities. In their research on the Social Determinants of health, Deguara et al. (2017) mention that these aspects are rarely considered as important in the national health policy agenda in Malta. Another study pointed out that there are neighbourhood socio-geographic conditions related to the role of the family, social norms and social participation practices that are highly important for people's wellbeing, as these act as a buffering effect especially in deprived neighbourhood conditions (Satariano, Curtis 2018). Therefore, this study takes the context of Malta as a useful case study as:

- (i) inequality tends to be on the homogenous side, yet there are specific groups who may be experiencing income or wealth inequalities and the COVID-19 measures might accentuate this;

- (ii) the Social Determinants of health are rarely taken into consideration in Malta and therefore understanding the secondary effects of the pandemic is highly important for the Maltese population;
- (iii) within the first wave, Malta experienced very low rates of COVID-19 cases because it took strict lockdown measures to limit the possibility of the spread yet might have disregarded the secondary effects of these measures and their impact on wellbeing;
- (iv) Malta is a very densely populated country with very limited amount of open spaces;
- (v) Maltese people, due to climatic conditions and cultural factors, highly depend on outdoor social interaction as a form of relaxation and a buffering effect for their wellbeing.

## **Methodology**

This study applied a mixed method approach, combining quantitative and qualitative data as well as a case study approach (Van Wynsberghe, Khan 2007) to reveal the complexities related to the social determinants of health that have been generated by the pandemic and the related restriction measures.

## ***Data Collection***

Due to the restrictions imposed by the pandemic the data was collected through a questionnaire that included closed-ended and open-ended questions distributed between the 20<sup>th</sup> March and the 20<sup>th</sup> April 2020, using online platforms (such as Facebook and the University of Malta notifications channel). The questionnaire consisted of 26 questions focusing on various themes related to the social determinants of health and the participants rated and explained how the changes in the measures of the pandemic were affecting their wellbeing.

Prior to dissemination, the questionnaire underwent ethical approval from the University of Malta. The target representative population sample was 400, however we received 973 valid responses. Table 1 shows the descriptive statistics that characterise the population sample under study together with the national data, indicating the level of representation of our sample in relation to the national population.

Malta is the smallest and most densely populated country in the EU (National Statistics office, 2019). It enjoys several coastal environments; however, it has a very limited number of green inland spaces and the majority of the population live in urban areas. The first reported case of the virus in Malta was on the 7<sup>th</sup> March 2020 and by the 12<sup>th</sup> March, with 12 positive cases recorded, Malta started

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enforcing measures of a partial lockdown such as the physical closure of schools, non-essential shops and offices. Moreover, anyone with the possibility of working from home was encouraged to do so (Baldacchino 2020). During this period, Italy was the country with the highest number of cases and deaths (Makowiecki et al. 2020). The proximity Malta has with Italy and the fact that the Maltese follow Italian television stations might have greatly alarmed the public and authorities. Due to this, the health authorities in Malta succeeded to control the spread of this disease and the number of deaths during the first wave of the pandemic when compared to other nearby countries such as Italy and Spain. This paper analyses the experiences of people during the partial lockdown of Spring 2020.

**Table 1: Descriptive data of research study sample in comparison to the national Census data of Malta**

Variable	Details	Percentage Questionnaire	National
Gender	Male (M)	30	50
	Female (F)	70	50
Age*****	18-29	47	17
	30-39	21	15
	40-49	19	13
	50-59	8	13
	60+	5	25
Landscape type where the participants live	Highly urban (HU)	25	25****
	Rural with green (RG)	8	9****
	Rural with green & blue (RGB)	15	20****
	Urban with blue landscape (UB)	24	27****
	Urban with green space (UG)	28	19****
Occupation*	Legislators & senior officials (L)	3	11
	Professionals (P)	34	19
	Technicians and associate professionals (T)	4	14
	Clerks (C)	16	11
	Service workers & shop & market sales workers (SW)	3	20
	Student (S)	35	3***
	Retired (R)	3	15**
	Other (O)	2	16
<i>n</i> = 973			

\*NSO 2020 News Release, Labour Force Survey Q4/2019

\*\*\*NSO 2019 Regional statistics

\*\*\*Tertiary enrolled students NSO 2020 Post-Secondary and Tertiary Student Enrolments Academic year 2017-2018

\*\*\*\*Census 2010

\*\*\*\*\*NSO 2018 Population Statistics Revisions 2012-2016

### *Data Analysis*

The analytical method consisted of two phases. In the first phase we analysed the relationships between variables and subsequently developed a cluster analysis. The Pearson Chi-Squared test with results of a p-value  $<0.05$  were presented, followed by a two-step Cluster Analysis which was carried out to identify the group profiling of the participants. This analysis served to identify the composition of our sample and discover in more detail the groups experiencing an increase in tension levels, so that the individuals mostly being affected by the pandemic measures are better understood. Since Cluster Analysis groups' data have similar characteristics, the visualisation and exploration of groups of participants is facilitated (Sinharay 2010). The outputs of the clusters were then used to create cross-tabulations with the socio-demographic and geographic variables that were originally identified at the beginning of this statistical procedure. Considering that previous research (Betti et al. 2015) pointed out that inequalities in Malta are not strongly related to regions, we decided to cluster localities according to the type of neighbourhood landscape environment, as the lockdown measures limited people's mobility outside their neighbourhood area and therefore the type of environment found close to their home may be important. The densely built-up neighbourhoods lacking public gardens or coastal open areas were grouped as Highly Urbanised (HU). Those neighbourhoods which are highly urbanised but have coastal areas were classified as Urban with Blue landscape (UB), while those urbanised neighbourhoods with public gardens were classified as Urban with Green spaces (UG). The rural neighbourhoods without coastal areas were classified as Rural with Green spaces (RG) while those localities which have both coastal areas and green spaces were classified as Rural with Green and Blue spaces (RGB).

During the second phase, we applied elements of grounded theory approach (Glaser, Strauss 1967) and analysed the qualitative open-ended questions in order to investigate how the wellbeing of different groups of people was being affected in relation to the various social determinants of health. We explored how the restrictive measures related to the pandemic were impacting people's wellbeing through a number of themes related to age, marital status, family environment, housing

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conditions, employment prospects and conditions, the need for socialisation and the neighbourhood environment. The in-depth responses written by the respondents describing their experiences during the pandemic were extracted and uploaded on NVivo9 and an open coding approach was used where sentences and phrases were grouped under codes of themes and topics (Bryman 2008). Through these accounts we could understand in more detail the experienced inequities and inequalities of the respondents, and how these impacted their wellbeing during this period.

### *Limitations*

Given that the questionnaire was conducted online, more females, professionals, and students participated, while people who are deprived, illiterate and digitally illiterate might not have been able to participate due to the lack of resources and ability. Therefore, the emergent findings were identified from the available population sample, which may have excluded the experiences and data of some groups who might have been already vulnerable to various aspects of inequalities and inequities.

### **Results and Analysis**

The first part of the analysis profiles participants according to their increase in tension levels using a two-step Cluster Analysis. Following this an understanding of the emergent inequities and inequalities related to the social determinants of health are analysed through in-depth qualitative responses explaining why certain groups of people were experiencing an increased level of tension during this time.

### *Profiling participants through Cluster Analysis*

The two-step Cluster Analysis enabled the profiling of participants, grouping them according to their increase in tension levels with the start of the pandemic and according to their age, gender, location and employment. The model indicated a good cluster quality, and eleven cluster groups were produced as indicated in Table 2.

**Table 2: Cluster groups of participants showing the proportion of the population sample and description of classes**

Variables	1	2	3	4	5	6	7	8	9	10	11	Combined
Values in brackets are %	47(5)	90(9)	144(15)	127(13)	174(18)	109(11)	76(8)	37(4)	71(7)	65(7)	33(3)	973(100)
Gender												
Male	8(3)	39(13)	52(18)	52(18)	48(17)	39(13)	14(5)	5(2)	10(3)	14(5)	8(3)	289(100)
Female	39(6)	51(7)	92(13)	75(11)	126(18)	70(10)	62(9)	32(5)	61(9)	51(7)	25(4)	684(100)
Age												
18-29	18(4)	37(8)	58(13)	47(10)	107(23)	52(11)	34(7)	20(4)	40(9)	32(7)	15(3)	460(100)
30-39	12(6)	16(8)	22(11)	36(17)	38(18)	26(13)	16(8)	8(4)	10(5)	14(7)	8(4)	206(100)
40-49	12(7)	18(10)	39(22)	23(13)	19(11)	15(8)	18(10)	7(4)	13(7)	9(5)	7(4)	180(100)
50-59	2(3)	13(16)	14(18)	13(16)	7(9)	10(13)	6(8)	2(3)	4(5)	7(9)	2(3)	80(100)
60+	3(6)	6(13)	11(23)	8(17)	3(6)	6(13)	2(4)	0	4(9)	3(6)	1(2)	47(100)
<b>Feeling tense before the introduction of COVID-19 in Malta</b>												
Not at all	47(12)	73(19)	144(37)	127(32)	0	0	0	0	0	0	0	391(100)
Somewhat	0	17(5)	0	0	174(46)	109(29)	76(20)	0	0	0	0	376(100)
Moderately	0	0	0	0	0	0	0	3(2)	71(41)	65(38)	33(19)	172(100)
Very much	0	0	0	0	0	0	0	34(100)	0	0	0	34(100)
<b>Feeling tense after the introduction of COVID-19 in Malta</b>												
Not at all	0	90(93)	0	0	0	0	0	7(7)	0	0	0	97(100)
Somewhat	0	0	144(49)	0	0	109(37)	0	5(2)	0	0	33(11)	291(100)
Moderately	0	0	0	127(34)	174(47)	0	0	3(1)	0	65(18)	0	369(100)
Very much	47(22)	0	0	0	0	0	76(35)	22(10)	71(33)	0	0	216(100)
Landscapes												
Highly urban	13(5)	21(9)	26(11)	30(12)	37(15)	33(14)	21(9)	10(4)	20(8)	20(8)	12(5)	243(100)
Rural with green	3(4)	3(4)	9(11)	8(10)	21(26)	9(11)	8(10)	4(5)	6(7)	7(9)	4(5)	82(100)
Rural with green and blue	4(3)	8(6)	28(20)	26(18)	31(22)	16(11)	10(7)	2(1)	5(4)	8(6)	3(2)	141(100)
Urban with blue promenade	12(5)	37(16)	37(16)	28(12)	33(14)	25(11)	17(7)	9(4)	19(8)	10(4)	5(2)	232(100)
Urban with green space	15(5)	21(8)	44(16)	35(13)	52(19)	26(9)	20(7)	12(4)	21(8)	20(7)	9(3)	275(100)
Statistically significant p-value = <0.05												



This Cluster Analysis clearly showed that the groups with a higher percentage of males (i.e. 2, 3, 4) were those least likely to experience high levels of tension before COVID-19. Cluster 2 indicated that even with the pandemic measures they were not experiencing any feelings of tension even though a high percentage of this group were retired elderly men and were therefore considered as clinically vulnerable to the virus (Jin et al. 2020). Cluster 3 indicated that their tension levels have somewhat increased with the start of the pandemic measures, however their tension levels did not increase as much as those of cluster 4. Cluster 5 was mainly composed of young adults including students who indicated that before the COVID-19 pandemic they were already feeling somewhat stressed. Cluster 7 and 9 were composed of participants who were predominantly females, of different age groups predominantly living in urban spaces. These clusters were already experiencing moderate levels of tension and with the pandemic these tension levels increased. Cluster 8 and 11 who were also mainly composed of females were very stressed before COVID-19 yet with the partial lockdown of the pandemic, were now feeling the same amount of tension or less tension than before. Cluster 6 and 10 were composed of an almost equal percentage of males and females, who live in different neighbourhood environments and were employed in different employment sectors. The tension levels of these clusters remained the same before and during the partial lockdown. The cluster group with the highest level of increase in tension levels was cluster 1 composed of predominately females, of different age groups but mainly aged in their 40s and 60+ who reside in urban environments.

The Cluster Analysis showed that there are specific groups of people, including young adults, women and those living in urban areas, whose wellbeing has been negatively affected. Through qualitative responses, this Cluster Analysis will be given a deeper understanding of the participants' experiences and how the pandemic and the restrictive measures impacted on their wellbeing due to the various experiences related to the social determinants of health.

### *Inequalities in Gender, Age and constitutional factors*

As observed in the Cluster Analysis, age and gender were strong determinants of the experience of the measures taken in relation to the pandemic and their effects on wellbeing. Women were experiencing higher levels of tension when compared to men (Table 3). Women were already feeling somewhat tense before the COVID-19 and even more so with the start of the partial lockdown during the pandemic. *'I have to remind them [other members of the family] to be careful, to continuously wash their hands and everything else. I am washing and cooking all the time as being locked inside is making everyone hungry all the time and besides that there is schooling. This is so stressful...'* (F, 42, C, HU).

**Table 3: Feelings of tension before and during COVID-19 pandemic according to gender**

Before COVID-19	Not at all tense	Somewhat tense	Moderately tense	Very tense
Males	51%	36%	11%	1%
Females	36%	40%	20%	4%
During COVID-19	Not at all tense	Somewhat tense	Moderately tense	Very tense
Males	14%	35%	40%	12%
Females	8%	28%	37%	27%

### Age

Due to their risk of mortality, the elderly were experiencing a high increase in tension levels (Table 4), while adults (30-39 and 40-49) whose parents are elderly were experiencing increased levels of tension in comparison to the 50-59 age group. This may be so as they are the age group with dependent children and possibly with parents alive yet dependent also on them. Within the Maltese context the extended family members have an important role in supporting their adult children physically, materially and psychologically. In order to keep social distancing, the young adults felt that they were abandoning their parents in this time of need, yet if they visited them they might have passed the virus to them. *'I am very worried - worried for ourselves and for our immediate relatives, seeing that they are elderly and one of them is also immunodeficient... it stresses me'* (F, 38, P, RGB).

As observed in cluster 5 of the Cluster Analysis, young adults and students claimed that they were already feeling tense in relation to their studies. However, because of the pandemic, uncertainties about the progression of their course, future employment opportunities and lack of socialisation with friends increased. *'Unmotivated to study and it's a routine which is unbreakable at this point. Wake up, sit, sit at my desk, eat and sleep. Repeat'* (F, 22, S, UG).

**Table 4: Percentage of sample experiencing tension before and during COVID-19 pandemic according to age groups**

Age groups	Not at all tense		Somewhat Tense		Moderately tense		Very tense	
	Before	During	Before	During	Before	During	Before	During
18-29	34%	8%	43%	28%	19%	41%	4%	23%
30-39	40%	10%	40%	28%	16%	43%	3%	19%
40-49	49%	11%	31%	34%	17%	28%	3%	27%
50-59	49%	18%	33%	33%	18%	34%	1%	16%
60+	53%	13%	30%	38%	17%	30%	0%	19%

### *Personality*

From the in-depth responses, it emerged that personality was an important factor that determined the experience of the partial lockdown and how this affected wellbeing. According to those who are introvert, staying inside away from people was enjoyable. *'I've always enjoyed staying indoors before the virus. It's what I prefer'* (F, 44, C, UG). While extrovert individuals felt that staying inside for long periods was negatively impacting on their mental wellbeing. *'I am not used to spending so much time at home alone not meeting anyone'* (F, 38, P, RG). Those individuals who have a sense of self-control were not letting their emotions take over and affect their mental health and wellbeing. Some explained that one can easily get carried away with negative emotions during this time, however realistically they accepted the situation and tried to make the best of it. *'Staying at home can be depressing but that is what is required from us to end this pandemic as early as possible'* (M, 22, S, HU).

### *Status, household composition and environment*

The marital status (married, single, engaged, widowed) and the household composition of individuals (parents of young or old children etc.) highly determined one's experience during lockdown.

As can be observed in cluster 10, it emerged that, for some parents, staying inside was not only preventing the contraction of the virus, but was relieving them from the stressful daily errands and activities which used to impact negatively on their wellbeing. Therefore, some married couples were regarding this situation positively. *'This is the life I want – less travel less hectic timetable, less binding schedules, flexibility – allowing for more self and family care... healthy eating and personal care'* (F, 45, P, UB).

Yet, other married couples remarked that they were not used to spending so much time at home together, which was proving to be very difficult and frequently the family environment ended up being hostile. *'We are not used to staying so much time together inside and we frequently end up fighting on silly things'* (F, 32, C, RG).

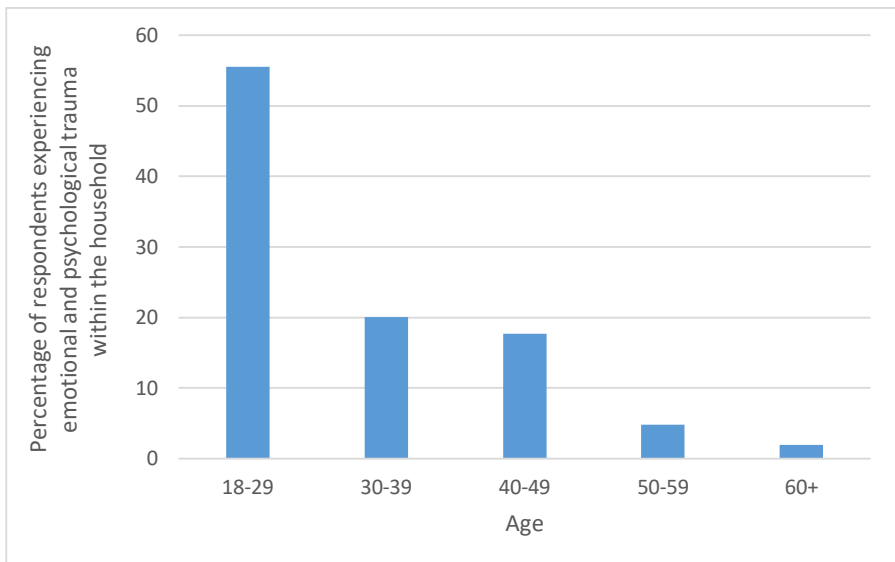
Respondents who live on their own have explained that spending so much time inside created feelings of loneliness. *'Living alone makes it tough especially in the evening'* (F, 54, P, UG). Similarly some separated or divorced parents experienced loneliness as social distancing measures were limiting them from seeing their children since they live in another household. Widowed individuals too have indicated that the social distancing measures have rekindled aspects of mourning and grief. *'Since the time my husband died... I am feeling down and lonely again'* (F, 82, O, RG). Observing other families spending time with their immediate family while they were alone affected their mental health and wellbeing.

Those adults who reside with their elderly parents felt anxious that unknowingly they may be spreading the virus to their parents when they returned home from work. They were constrained to spend less time with different groups of people in order to protect their parents. *'To protect my parents I am not meeting anyone besides my family and I miss my boyfriend and friends very much'* (F, 21, S, UG).

Parents of young children commented on the difficulties of keeping their children occupied with enjoyable activities inside. *'Staying too much at home with a young child to attend to is a bit tiring'* (F, 43, C, RG). Parents of secondary school-aged children showed different concerns as their children were spending long hours of screen time playing and learning. *'We are super busy with home schooling our older son, whilst entertaining both our boys throughout much of the day, as we do not want to avoid having them attached to a screen all the time'* (M, 38, P, HU).

Young adults complained that they preferred the company of their friends rather than that of their family members. Some do not feel compatible with their family and the fact that they were not interacting physically with their friends made them feel lonely. As observed in Figure 1, the young adults were those who mostly expressed that they were experiencing emotional and psychological trauma at home during the pandemic. *'I don't really get along well with my family and I am frustrated that I can't leave the house for a few minutes'* (F, 20, S, UB). *'Since my family members are spending most of their time indoors, we're clashing more and it's contributing to my feeling tense and giving me panic attacks'* (F, 21, C, UG).

**Figure 1: Percentage of respondents experiencing emotional and psychological trauma within the household according to age groups**



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The family environment can also be damaging for the health and wellbeing of people who were in abusive relationships at home. Spending long hours inside put these victims at further risk of physical and mental abuse and loss of good health and wellbeing. *'Women who were already suffering at home are now suffering more' (F, 55, P, UB)*

### *Schooling*

The experience of online schooling created an increase in stress for some parents as well, who may have been less digitally literate and could have been concerned about being unable to help their children. This occurred because teachers and children were not digitally trained or equipped for online synchronous teaching and thus the teachers depended greatly on the digital literacy of the parents. This created inequalities amongst children and the success in children's learning was determined by the parents' digital literacy.

Working parents found it very hard to juggle between the digital schooling demands and their online work at the same time. Although this method enabled children and adults not to be exposed to the virus, mismanaged online schooling put pressure on parents, especially mothers. *'On top of that children's school and explanation work has mostly been shifted on parents, who besides, have to cope with all the housework and shopping for vulnerable members of the family etc.'* (F, 44, P, UG).

### *Housing conditions*

Some respondents have commented that their housing environment does not enjoy enough space as it was not planned and designed for all members of the family to work and study together at the same time in one space.

*'Today's apartments are quite small and families might be feeling more stressed and claustrophobic and difficult to control the children. At this point the apartment feels overcrowded and this might cause further distress' (F, 34, T, UG).*

Other respondents explained that their house lacks good natural lighting due to recent erection of higher buildings taking place close by, which to some extent was formerly tolerated as one could spend time outside. However, being forced to stay inside impacted on these dwellers' mental health and wellbeing. *'Our elderly have lost privacy of their homes because of a neighbourhood construction of flats. Their internal yards have become service yards and lack light especially those who live on the ground floors and now having to stay inside in the dark is depressing them'*

(M, 23, SW, UG). Those individuals whose housing environment lacks outdoor space such as a balcony, a roof, a courtyard or a garden were also being negatively affected as they had to spend long hours inside and were not able to enjoy a daily dose of fresh air. *'I live in a very small flat with a very small balcony. I also have a very small child. It feels like we live in a prison....I will definitely consider a larger household in the future with a large garden, balcony etc.'* (M, 30, P, UB).

Furthermore, those living in apartments were experiencing high levels of tension as they feared that they will contract the virus from shared common parts within the building block. *'At the moment we are living in a block of apartments, every time we need to go out we have to touch lift buttons and door handles which may have been touched by others, infected with the virus'* (F, 42, P, HU). Those living in households with shared common parts who formerly were experiencing wealth inequality in comparison to those living in houses ended up experiencing an increased level of inequality with these measures, as their living environment made them more prone to contracting the virus too.

On the other hand, those who are owners of houses enjoying outdoor space were not feeling aspects of inequality but were grateful that their house is comfortable and airy. Hence their level of stress is lower. *'I am lucky that I do not have a substandard house built cheap[ly]'* (F, 47, P, UG). *'The few minutes of relaxation I get are when I'm in the garden or on the roof with some fresh air. That's bliss'* (F, 20, S, UB).

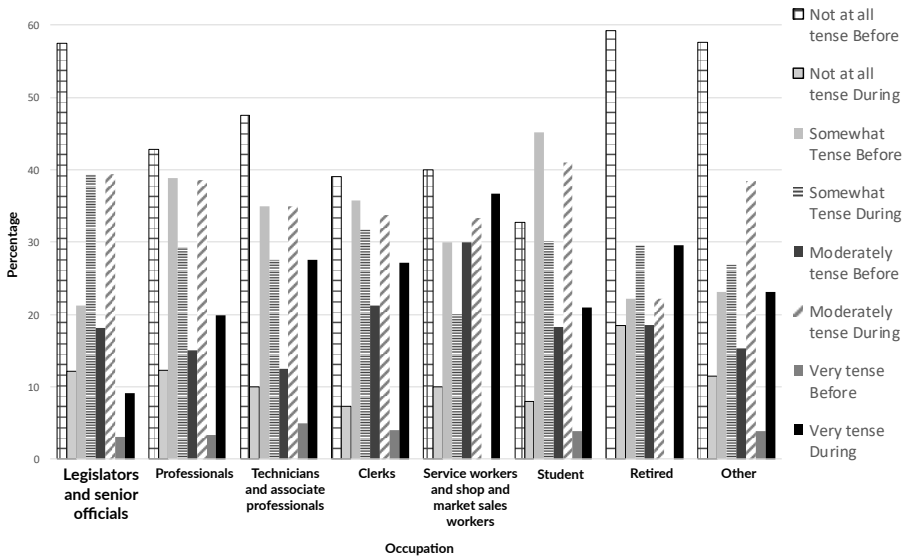
### *Employment conditions and opportunities*

As observed in Figure 2, those engaged in low income employments such as service workers, shop assistants, students as well as retired people were experiencing higher levels of tension during the pandemic.

The fear of facing unemployment due to the pandemic was making some groups of people experience an increase in stress and tension, as they were concerned that they might not be able to maintain their family's financial needs. *'I am more worried about the long-term effects ... so many are and/or will be in dire financial difficulties. My moderate income will probably half'* (F, 56, SW, HU). Female employees were more likely to feel tense due to the possible employment changes (74%) in comparison to male employees (26%) indicating that due to familial demands women are more likely to be employed on part-time basis or in less stable employment positions in order to take care of the family. Furthermore, some students have studied to be qualified in certain types of jobs that with the pandemic were in decline. This uncertainty in future employment opportunities created levels of stress to these group of participants, making them experience anxiety since they were feeling that the time invested in their studies has been wasted. *'I am worried about how long things will be this way, how this will impact our country economically, how this could affect my family (health wise and financially) and my studies'* (F, 22, S, UG). Yet,

The emergent inequities and inequalities resulting from lockdown and social distancing measures it also emerged, interestingly, that although retired persons expressed a drastic change in tension levels, they were also those who were mostly not feeling tense at all during the pandemic. This may explain that employment and income inequalities were causing adults and young adults to experience higher tension levels. The retired were feeling tense in relation to the virus but were not feeling inequalities due to the side effects of the pandemic. This indicates that the increase in stress and tension amongst adults was high as they were concerned about both the pandemic itself together with its likely repercussions.

**Figure 2: Levels of tension experienced before and during the first wave of COVID-19 pandemic according to their economic activity status**



Another aspect causing feelings of inequity and inequality was the type of work and its exposure to the virus. The family members of people who are either front liners or have to go out to work were mentally strained, as were the workers themselves. *'My mum can't work from home so she is at the biggest risk.'* (F, 19, S, UB). It was explained that when members of the family returned home from work, they felt stressed and anxious for fear of spreading the virus to their family members. *'I am worried that my husband still has to go to work and might catch COVID-19 and transmit it to the rest of us'* (F, 36, P, HU).

On the other hand, those working from home had a better sense of security in relation to the contraction of the virus as their work could be done from home. *'I am glad to stay at home and not go to work and risk catching something from there!'* (F, 24, C, HU).

*Access to social media and features of social capital*

Previous studies focusing on the local Maltese social determinants of health operating at a neighbourhood context (Satariano, Curtis 2018, Satariano 2019) emphasised that people experiencing features of social capital, social participation and social interaction, experienced positive features of wellbeing. Yet the measures of social distancing put people who depended on social interaction for improved wellbeing at risk of mental ill-health. *'I am not used to spending so much time at home and with each passing day I become even more anxious of having to stay inside not meeting anyone'* (F, 38, P, RG). The majority of countries, including Malta, adopted policies of social distancing to stop the spread of COVID-19. However, this was stopping other features of social capital which used to help in protecting mental health and wellbeing. *'I cannot meet my friends and loved ones who usually support me mentally and emotionally during difficult times'* (F, 19, S, UB).

Due to the Mediterranean climatic conditions, the local norms typically encourage the Maltese population to socially interact and spend time outside in squares or in the streets (Satariano 2020). *'You need that time where you just go get a coffee and meet different people'* (F, 20, O, HU). The lack of social interaction and face-to-face communication emerged as one of the aspects that was mostly yearned for and needed for mental health and wellbeing. *'I am a bit worried about the long term implications of staying inside especially in summer'* (F, 18, S, UG).

Access to social media gives the possibility of virtual social interaction, thus helping to reduce the impact of social isolation on mental health and wellbeing, while limiting the spread of the virus. *'It's an uncomfortable situation not to be able to enjoy the outdoors and meet friends and family but at the same time, I am keeping in touch with everyone through social media'* (F, 24, P, UB).

It emerged that the younger age groups, even though they are the age most likely to make use of social media, were more likely to experience feelings of isolation. *'Not meeting close friends and family, affects one's mental health'* (M, 26, L, HU). *'There are some moments when I greatly miss the social aspect of going out to meet loved ones - and these moments are becoming increasingly frequent as time inside goes by'* (F, 31, P, UB). Furthermore, those who had limited access to social media were not only feeling excluded physically but also virtually and were therefore at high risk of social exclusion and loneliness. *'I miss mostly my grandparents who have to stay inside and we cannot visit them. They don't know how to use social media. This makes me so sad'* (F, 22, S, UG).

However, over dependency on social media caused some to experience anxiety due to the continuous exposure of news of the high rate of mortality and infections. *'It is inevitable that you worry. This is especially true if you follow social media'* (F, 48, P, RGB). Although this information on social media helped people realise and be aware of the severity of the virus, it also caused these individuals to experience anxiety, fear and stress.



### *The neighbourhood environment and its therapeutic spaces*

The fact that safety measures issued by the health authorities limited mobility for shopping of goods within the immediate neighbourhood environment, meant that the type of neighbourhood one lives in emerged as a very important determinant for people's wellbeing. The natural open therapeutic landscapes such as the sea and/or the greenery in the countryside emerged as highly important and beneficial during this period of the pandemic, as these environments could help individuals improve mental health and wellbeing due to contact with nature. *'Being out there in the countryside is so good for mental health care. I wish I could have a walk in the countryside'* (F, 45, P, UB).

However not everyone lives in neighbourhoods that have green or blue open spaces. Indeed, the wellbeing of those individuals who live in highly urbanised neighbourhoods were negatively affected as living in densely populated neighbourhoods not only puts them at higher risk of contracting the virus but also lacks the much-needed therapeutic experiences provided by open spaces (Figure 3 and Table 5). *'I also know that outdoor living experiences are important physically and emotionally and hence my concern is how to achieve this new balance while respecting social distancing'* (F, 45, P, UB).

On the other hand, some of the participants living in rural environments with open spaces in the countryside and near the sea were less likely to experience an increase in tension during the COVID-19 pandemic. *'I can go outside, especially to walk or jog'* (M, 34, P, RGB).

Respondents have also commented that there are inhabitants who live in neighbourhoods where the residents do not show respect towards each other and therefore create a hostile environment. *'I worry about the mental health of some friends who live in poorly built houses in urban ghetto neighbourhoods where there is hostility and lack of cooperation'* (F, 47, P, HU).

This indicates that the pandemic measures experienced within an urban neighbourhood environment with a high population density were highly damaging for wellbeing. These measures hindered inhabitants from going outside due to the fear of lack of social distancing, the knowledge that there are no therapeutic environments nearby and the fact that their neighbours might be disrespectful towards them.

**Table 5: Feelings of tension experienced by the sample respondents before and during COVID-19 pandemic according to the neighbourhood environment**

	Not at all tense		Somewhat Tense		Moderately tense		Very tense	
	Before	During	Before	During	Before	During	Before	During
Highly urban	36%	9%	38%	30%	22%	36%	4%	25%
Rural with green	27%	4%	48%	28%	20%	44%	5%	24%
Rural with green and blue	45%	6%	42%	33%	12%	46%	1%	14%
Urban with blue promenade	47%	16%	35%	29%	15%	31%	4%	23%
Urban with green space	40%	9%	38%	29%	19%	40%	4%	22%

**Figure 3: Percentage of individuals experiencing stress and tension due to their neighbourhood contextual environment**

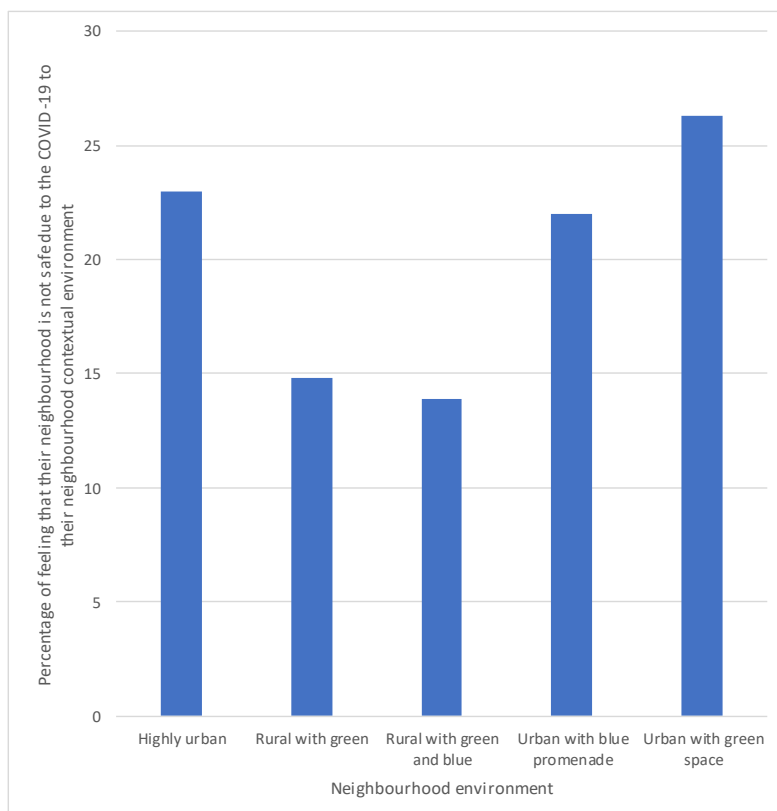
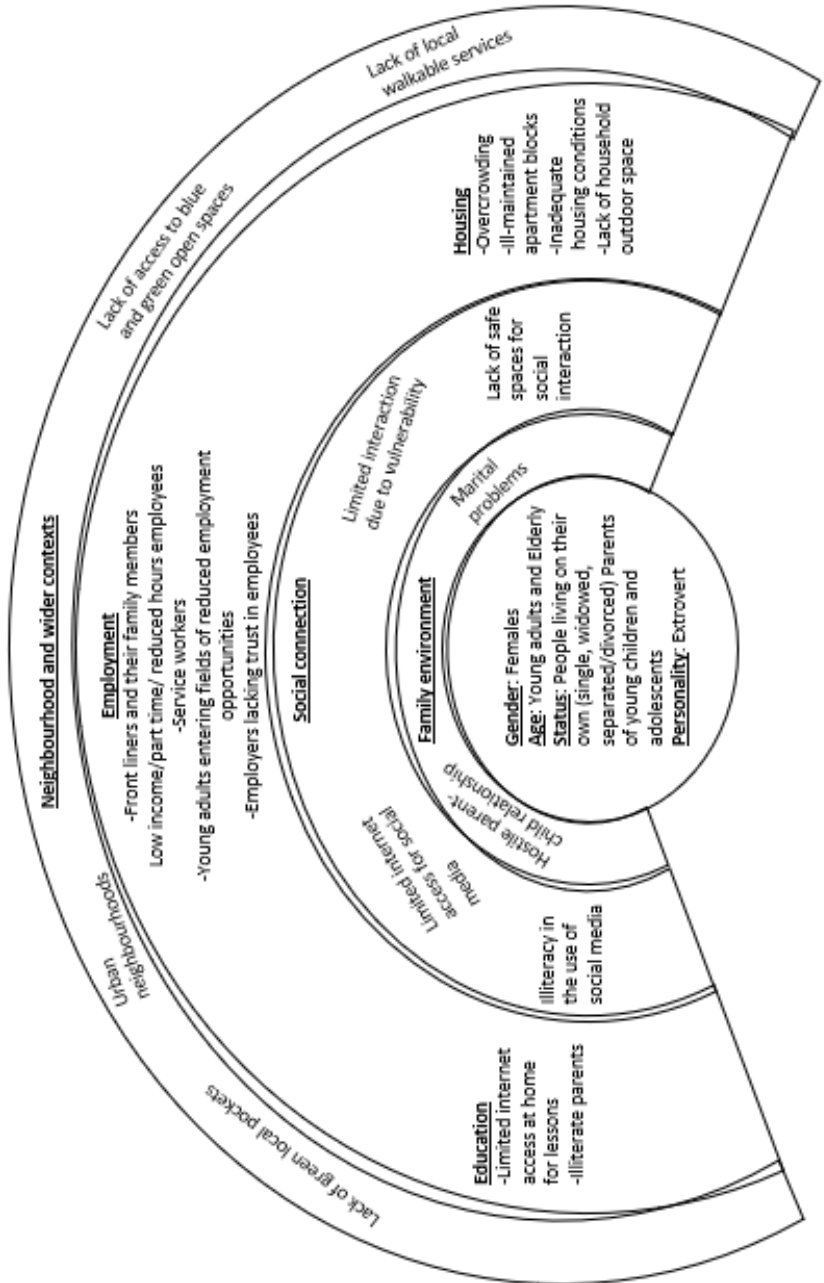


Figure 4: The model of inequalities experienced across the Social determinants of health due to the COVID-19 with the Maltese context. (Adapted from Dahlgren and Whitehead, 1991)



## **Recommendations and Conclusions**

This study has enhanced the understanding of who was experiencing emerging inequities and inequalities within a Maltese Mediterranean context during the first wave of the pandemic in relation to lockdown and social distancing measures. Moreover, it has contributed internationally to the knowledge of how the experience of these lockdown measures impact on wellbeing in variable ways in relation to the social determinants of health. As summarised in the model in Figure 4, a number of groups of people including women, young adults, elderly and people employed in unstable, low income jobs, those lacking IT skills, those living in densely built housing environments, and in neighbourhoods lacking therapeutic green and blue open spaces were and may still be experiencing higher levels of inequities and inequalities and so their wellbeing has been negatively affected. The repercussions of this pandemic and the lockdown measures are likely to continue being experienced across the lifecourse of these groups of individuals, if policies are not directed to help them improve their health and wellbeing.

This study highlighted the importance of giving attention to the social determinants of health within the context of a pandemic and within the Maltese context where social determinants of health are rarely studied and given importance. It has emphasised that the experience of the measures taken in relation to the COVID-19 pandemic created new inequities and inequalities related to the social determinants of health. From the emergent experiences, the impact on mental health may continue being felt across the lifecourse of these individuals.

Following the period of data collection for this study, Malta experienced a high rise in cases (Cuschieri et al. 2020) attributed to the lack of observance of measures of social distancing which may be considered as a reaction to the authorities' lack of understanding of the health damaging experiences of the lockdown measures within specific neighbourhood environments. This paper therefore emphasises the importance of policy planning in relation to the emergent inequities and inequalities and an understanding of how these impact on the mental health and wellbeing of different groups of people across the social determinants of health.

This study contributes to public health policy makers by highlighting who the groups of people mostly in need of help and support are, why they need it and where they need it. The experience of the measures of the lockdown are highly complex as some aspects can be experienced positively by some groups of people yet negatively by others. Therefore, this study shows that during this period of time, the protection from the deadly COVID-19 virus can also cause lifecourse effects on those whose wellbeing has been negatively affected due to feelings of inequality and inequity.

This paper also contributes to research by highlighting that the experiences of the social determinants of health during this pandemic are highly relational to the individual's status, age, gender, personality and economic stability together with housing and neighbourhood environment. This study suggests that researchers and

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policy makers may need to be more aware of the complexity of the experiences linked to the measures of the lockdown which although they limit the spread of the virus, can also greatly harm the wellbeing of different groups of individuals. Public health strategies should aim at increasingly addressing these needs at a personal, social, economic and neighbourhood therapeutic level and should be sensitive to the variable experiences of the measures taken to stop the spread of the virus. This would help policymakers and public health officials not only to target the public health aspects related to the virus itself, but also to address the secondary effects of the measures and their impact on health and wellbeing. Thus, public health officials should not only take a strict stance on the spread of the virus but also on the experienced inequities and inequalities which may have public health repercussions throughout the lifecourse of individuals.

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