



Builders D3.5 Observations for Draft Policy and Other Measures in Building Resilience for the Severely Vulnerable Populations



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Executive Summary

The aims of the present deliverable are to synthesize the findings from BuildERS Work Package (WP) 3 survey and interviews with social care organisation representatives, extract the most viable observations for policy implications, and suggest these to be further elaborated as policy recommendations for vulnerability reduction of different social groups and in different countries.

The WP3 qualitative interviews involved 32 representatives of care organisations from 10 countries. The quantitative survey includes 313 clients of different social care organisations from 13 European countries. We divide the respondents in the quantitative survey into three groups of people: 1) Living in their homes; 2) Living on the street and in short-term shelters; 3) Living in long-term facilities.

A share of 42% of the respondents agreed that the pandemic has had a negative effect on their mental wellbeing, or mental health, while 37% agreed that they have been afraid of being infected with COVID-19 since March 2020, and 54 % of the respondents scored six or higher on our PTSD index, which means that they quite often experience PTSD-like symptoms related to COVID-19. To our knowledge, there are no other studies that have examined the mental impacts of COVID-19 among socially marginalised groups.

We assumed, based on previous research, that the psychological impacts would be least negative for socially marginalised people living in their own homes, as they have better opportunities to protect themselves from infection and as they are less marginalised than homeless people. Our results, however, do not support this hypothesis. Socially marginalised people living in their own homes reported significantly more negative impacts of the pandemic on their mental health and mental wellbeing than the other groups, while the lowest impacts were reported by people living on the street and under temporary conditions.

Comparing the level of social capital (i.e., bonding, bridging and linking) among the three studied marginalised groups, we find the highest levels among people living in their homes and the lowest levels among people living on the street and in temporary shelters. Respondents with high levels of bonding capital received more help from friends, family, and other social networks during the pandemic. Respondents with high levels of linking capital were more likely to engage in protective COVID-19 behaviours like self-imposed social isolation during COVID-19. Our results indicate lower levels of risk awareness among people living on the street or under temporary arrangements and a lower level of trust in government information about COVID-19. This group have thought less about preventive actions, are less likely to believe that the virus causes them notable harm and agree more that their life conditions prevent them from taking actions to prevent COVID-19. Additionally, people living on the street or under temporary arrangements were less afraid of being infected with COVID-19. In accordance with these results, our data indicate that people living on the street or in temporary arrangements were less engaged in protective COVID-19 behaviours, e.g. self-imposed social isolation during COVID-19.

The interviews with care organisations that provide help to these socially marginalised people demonstrated a surge of demand for shelter and food aid during the pandemic. In spite of the relatively resilient response of the aid organisations, outcomes were worse for some types of vulnerable individuals than others. Along with psychologically fragile clients and migrants, new clients – individuals pushed into such a vulnerable situation for the first time- were the critically challenged. In the report we provide a range of policy recommendations based on our results.



List of Acronyms

AB	Advisory Board
BuildERS	Building European Communities Resilience and Social Capital project
D	Deliverable
DoA	Description of Action
WP	Work Package
SAL	The Salvation Army
PTSD	Post Traumatic Stress Disorder



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BUILDERS D3.5 OBSERVATIONS FOR DRAFT POLICY AND OTHER MEASURES IN BUILDING RESILIENCE FOR THE SEVERELY VULNERABLE POPULATIONS

1. Introduction

1.1 Background

The overarching objective of the BuildERS project is to increase the resilience of European communities against both natural- and man-induced disasters by enhancing the social capital and risk awareness of its citizens in the face of the increased use of new technologies and media. A key ambition of BuildERS is to translate the scientific knowledge generated within the project to practical recommendations for actors engaged in crisis management.

This deliverable presents observations for draft policy and other measures in building resilience for severely vulnerable populations, based on BuildERS WP3. The deliverable focuses especially on the results of a WP3 survey. The purpose of the WP3 survey was to explore:

- 1) How vulnerable people cope in extreme events,
- 2) What resources are available to them for coping,
- 3) The immediate and long-term consequences of those extreme events, and
- 4) What deficiencies might exist in the care provided to these individuals in European regions.

The survey results will serve as a basis to address how we may reduce these various vulnerabilities on a policy level.

Following the study methodology tailored in Orru et al., (2020b), the groups included in the WP3 survey are clients of social care organisations (especially the Salvation Army), using services ranging from soup kitchens to homeless shelters and care facilities where people live for longer time periods. Thus, the included respondents range from people living in their own homes to people living on the street. We mainly focus on the level of protection provided by living arrangements as a source of social marginalization. In order to capture respondents' level of protection provided by living arrangements, we use the Framework for Understanding Homelessness on a Global Scale (Busch-Geertsema et al., 2016). The framework allows for the classification of people without accommodation, people living in temporary or crisis accommodation and people living in severely inadequate and/or insecure housing. We ask respondents: "Where have you been living and sleeping most of the time over the past year?", and we divide the answers on three alternatives: 1) My own home, 2) Centre/facility, 3) Street or temporary arrangement. These are the main three groups that we compare in the WP3 survey. Comparing the mental and material outcomes of COVID-19, we generally hypothesised that negative impacts would be least negative for people living in their homes and most negative for people living on the street or in temporarily arrangement, based on the differences in the level of marginalisation of these groups and the different levels of



mental and physical strain that their living situations involve (Busch-Geertsema et al., 2016). In the present deliverable, we refer to these individuals as socially marginalised people in general, and not “vulnerable groups” or “individuals in vulnerable life situations”.

In 2019, when the survey planning originally started, the focus was on extreme events such as weather, earthquakes, and violent demonstrations like terrorist attacks, and pandemics, but since the COVID-19 pandemic occurred as the survey was being developed, the survey’s focus shifted towards this type of extreme event. The current version of the survey still includes the original questions about whether respondents have experienced a range of different man-made and natural disasters in the last ten years, and the physical and mental strain this involved. We included these in order to examine the potential influence of such experiences on the respondents’ coping with the pandemic.

Additionally, since COVID-19 restrictions impeded survey data collection in several countries for longer periods in 2020 and 2021, we also included new data collection methods in WP3, in addition to the survey data. These new data sources are document analyses combined with digital interviews with representatives from social care organisations, to examine:

- 1) Challenges faced by their organisations during the COVID-19 pandemic,
- 2) How the organisations have coped with these challenges, and
- 3) How their clients have coped through the pandemic.

These qualitative data comprise an important backdrop to our quantitative survey data, as they provide contextualisation of the results, concrete illustrations and examples and important data about mechanisms for coping. The results of the survey and interviews with care organisations were further discussed and validated in workshops with representatives of care organisations carried out under WP6 in Estonia (2 workshops), Norway, Hungary and Belgium from June to September 2021.

1.2 Aims and research questions

The aims of the present deliverable are to: 1) synthesize the findings from the WP3 survey and the interviews with social care organisations representatives, and 2) extract the most viable observations for policy implications, and suggest these to be further elaborated as policy recommendations for vulnerability reduction of different social groups/ population strata and countries (which will be done to some extent in BuildERS Deliverable 5.3, which will include the final recommendations from BuildERS).

Synthesising the results of the WP3 survey, we have chosen to sum up the themes with eight research questions:

- 1) To what extent have the respondents been exposed to COVID-19 directly and indirectly, and to what extent have they been exposed to previous hazards before the pandemic?
- 2) What are the material outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes?
- 3) What are the mental health outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes?



- 4) How have the social care organisations coped with the challenges of the COVID-19 pandemic, to what extent and how have they been able to help their clients during the pandemic?
- 5) What is the level of social capital in the studied groups, and what is the role of this social capital for them during COVID-19?
- 6) Which factors influence respondents' risk awareness related to COVID-19?
- 7) What kind of COVID-19 protective behaviours have the respondents been involved in, and which factors influence this?
- 8) What kind of understanding of vulnerability and resilience among socially marginalised people in disasters do the qualitative and quantitative data provide us with?

1.3 Overview of key themes included in the WP3 survey

The themes in the WP3 survey stem from the BuildERS framework and enable empirical testing of its foundational theoretical concepts - vulnerability, resilience, social capital, risk awareness, and hazard exposure, as laid out in Orru et al, (2020b). These concepts are explained in detail in Section 2.

To provide an overview of the structure of themes in the WP3 survey, we lay out in the following paragraphs how these concepts are addressed in sub-components.

The questions in the survey comprise eight themes, and we illustrate their hypothesised relationships in Figure 1. This is a simplified model, in the sense that we have not drawn up all the possible and hypothesised relationships between the key concepts in the BuildERS framework or included all the relevant variables in the BuildERS framework.

The main purpose of the model in Figure 1 is to provide an introduction to the main themes included in the survey, and to show the relationships between them. Figure 1 is meant to give a coarse overview, while we present more specific hypotheses in the text describing each subtheme.



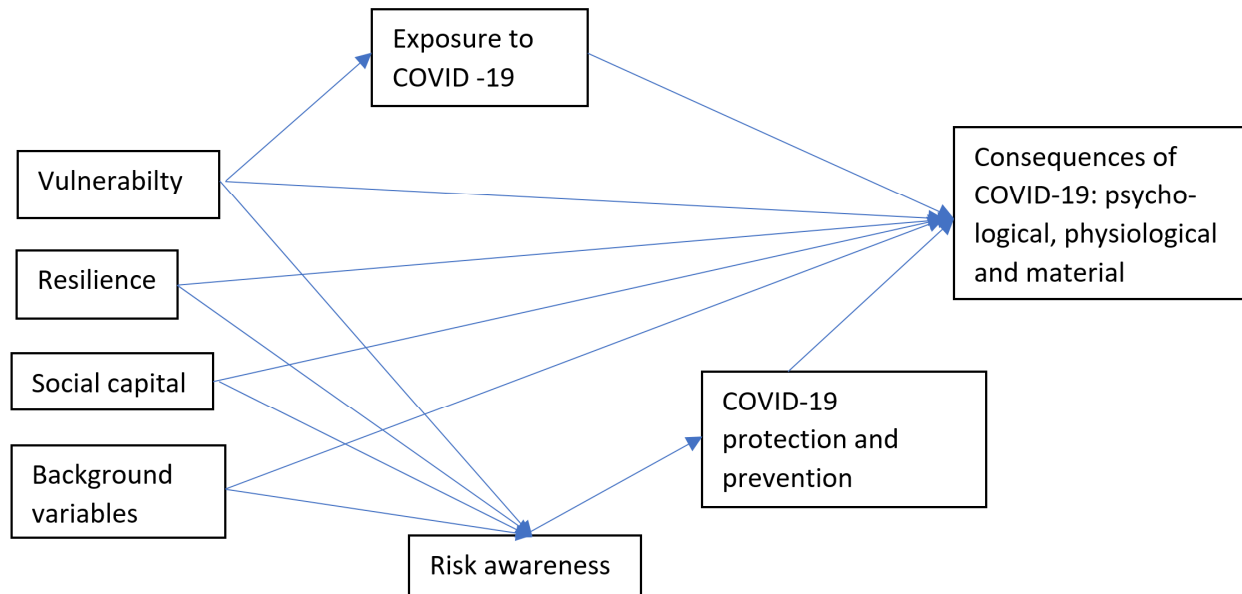


Figure 1. Hypothesized relationships between the eight themes in the WP3 survey

As explained also in Orru et al (2020b), the key elements of the survey are the following:

Exposure to hazard, COVID-19. Exposure to hazards is one of the primary concepts in the BuildERS framework (Morsut et al 2020) referring to the extent to which individuals, groups and communities are subjected to a hazard. Exposure is a necessary condition for a hazard to become a risk. In the survey, **exposure to COVID-19** is measured in several different ways: whether people have been infected with COVID-19 themselves, whether their acquaintances have been infected, whether they have lost someone close to COVID-19, and also as the levels of infection in their country.

COVID-19 protection and prevention behaviours refer to different types of behaviours that people can take to try to avoid being infected. The BuildERS framework (Morsut et al 2020) looks at resilience and distinguishes between the processes of proactive and reactive patterned adjustment, adaptation, and change enacted in the face of risks, crises and disasters. The protection and prevention behaviours cover the proactive side of resilience. In the survey, we measure this by means of the following questions: “Have you taken any of the following actions repeatedly during the pandemic period in order to avoid getting the virus? 1) I avoided contact with people from outside my current residence, 2) I washed myself more often, 3) I cleaned my living place more often” In the analyses, we especially focus on the first type of behaviour, which is referred to as self-imposed social isolation in the research literature. This is an aspect of social distancing.

COVID-19 consequences refer to the influences COVID-19 has had on respondents’ mental wellbeing and mental health, income, access to shelter, possibilities to wash and symptoms of PTSD. This covers the vulnerability outcomes in the BuildERS framework.

Vulnerabilities are dynamic characteristics of individuals or groups which make them susceptible to negative consequences in given situations, and which may manifest as a situational inability (or weakness) to access adequate resources and the means to anticipate, cope with, protect themselves from, recover and learn from the impact of natural or man-made risks (Morsut et al



2020). In the survey, we look for indicators of vulnerability that make a person more or less susceptible to the above-mentioned physical, psychological and material stress outcomes. We measure multiple indicators of vulnerability, both at the individual level (e.g., age, economic engagement, level of protection provided by living arrangements, residence status etc.) and the state/region-level (e.g., the infection rates).

Resilience in Figure 1 refers to the ability to quickly adjust and adapt to negative events such as a crisis, by engaging personal or external resources (Morsut et al 2020). The survey looks for those indicators of resilience that make a person more or less susceptible to psychological and material distress experienced through the pandemic. We focus on the pre-existing resilience factors (e.g. measured through an indicator of individual psychological resilience), as well as those protective factors evolving during the crisis.

Social capital is defined as networks, norms, values and trust that entities (individuals, groups, society) have available and which may offer resources for mutual advantage and support, as well as for facilitating coordination and cooperation in case of crisis and disasters (Morsut et al 2020). We discern between bonding capital (e.g., with family, friends), bridging capital (e.g., within a neighborhood), and linking capital (e.g. trust in authorities). These types of capital play different roles in different phases of disasters.

Risk awareness – The BuildERS framework (Morsut et al 2020) distinguishes between two conceptualisations of risk awareness: a) the more sociological notion of the interpretations of risks as a result of social interaction, and b) a psychological notion of risk perception at the individual and intuitive judgment level, referring to individuals' perceptions of the likelihood and potential consequences of particular risks. We operationalise the concept of "risk awareness" by asking respondents about the hazards that they worry most about (open answer category), as well as health hazards and their perceived risks related to COVID-19 (both related to their worry about infection and the consequences of infection).

Finally, the survey also includes several **background variables**, describing key characteristics of the respondents (e.g. their country of birth and age).

In the following, we explain the theoretical concepts that we measure in the survey, and their relationships more in detail.

2. Theoretical background and previous research

2.1 Theoretical approach in the BuildERS project

BuildERS aims to improve resilience within (especially) European societies and communities against crisis and disasters. The project aims to uncover who are the most vulnerable in European societies and for which reasons.

BuildERS aims to find out more about who are the most vulnerable in European societies and for which reasons. This is done based on the assumption that a) risk awareness, b) social capital and c) preparedness are core aspects influencing vulnerability (Common Vision; Morsut et al., 2020).

In doing so, BuildERS does not eliminate vulnerability as such – this is neither possible nor feasible, given the opportunity costs linked to building resilience and vulnerability rooted in life itself.



However, BuildERS does seek to mitigate vulnerability caused by discrimination and neglect of essential needs, intrinsic potential and special life contexts.

The expected impact of the BuildERS project is alternative strategies, technologies and tools to measure and reduce vulnerability and give recommendations on how to achieve them. These will engage different actors from all levels of European disaster management (EU/national/local), with a focus on policymaking officials, first responders, and civil society groups involved in crisis management activities. Furthermore, these recommendations will unfold an innovative potential for all phases of the crisis management cycle. The vision of the BuildERS project is operationalised into the following questions (cf. Table 1):

Table 1. Operationalisation of BuildERS vision (Source: BuildERS Common Vision)

ANALYSING who is vulnerable	What constitutes vulnerability and how can it be measured?
	In how far is there a shared understanding of vulnerability in different (national) contexts?
UNDERSTANDING why some are more vulnerable than others	What are the factors that lead to individuals becoming vulnerable?
	What are the factors that hinder individuals from coping with crisis?
RECOMMENDING AND INNOVATING how to increase capacities	How to make sure the most vulnerable are able (and supported) to use their potential and capacities as active agents in crisis?
	What recommendations can be given in order to build resilience?
	What kinds of new technologies could support the building of resilience?

The relationships between the BuildERS vision, objectives and WPs and the areas covered by WP3 is illustrated in Figure 2



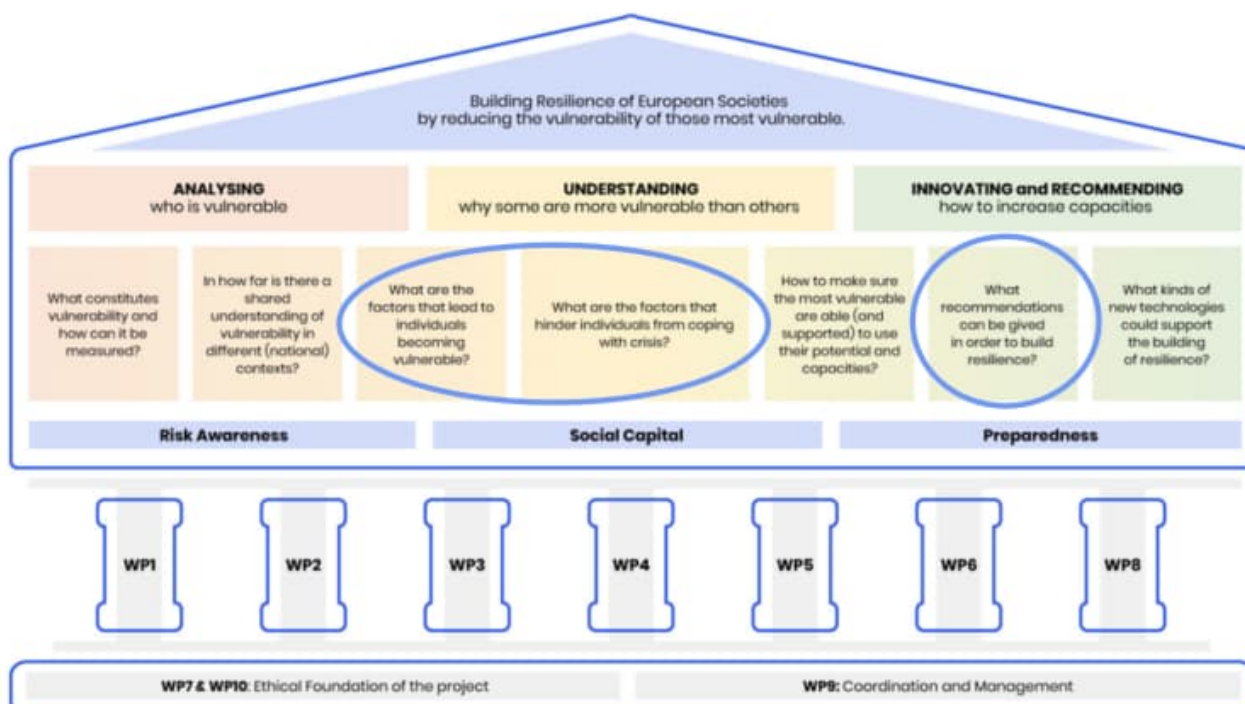


Figure 2. relationships between the BuildERS vision, objectives and WPs and the areas covered by WP3. Source: BuildERS Common Vision

2.2 BuildERS conceptual model

WP3 builds on the theoretical BuildERS approach and the hypothesised relationships between key concepts in BuildERS, as outlined in WP1 (Morsut et al 2020; Morsut et al 2021). The relationships between these key BuildERS concepts are illustrated in BuildERS theoretical model (cf. Figure 3).

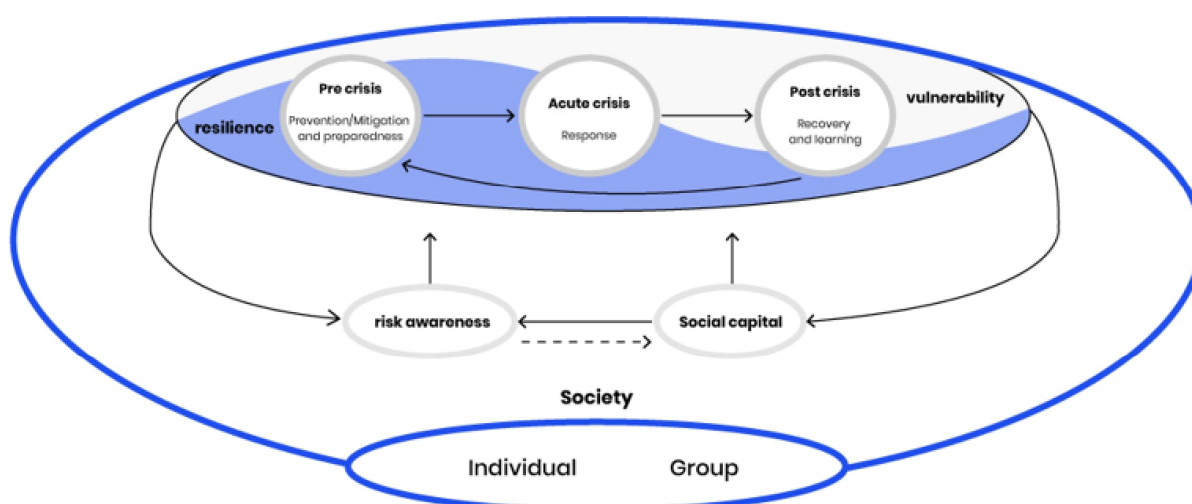


Figure 3. Final version of the BuildERS model. Source (Morsut et al 2020).



The oval at the bottom of the model includes individuals and groups explored by BuildERS in a given society in WP3 and WP4. Individuals tend to be aggregated into groups (see BuildERS Deliverable 1.3), which are or become vulnerable according to cultural and social conditions. Vulnerability and resilience are intertwined and, as such, represented in a sort of yin and yang dyad (in the top oval of the model). Resilience and vulnerability manifest in the pre-, acute, and post-crisis phases according to a mutual interdependency. Risk awareness and social capital are placed in the outer circle, as variables that can influence resilience and vulnerability throughout the crisis phases. Likewise, as the arrows indicate, resilience and vulnerability impact risk awareness and social capital. Social capital and risk awareness also influence each other, but social capital has more of an impact on risk awareness than vice versa, as the scholarship has pointed out (cf. Morsut et al 2020).

Related to the above, we will present previous research relevant to each of the eight research questions (laid out in Section 1.2) that we focus on in the present deliverable.

2.3 Exposure to COVID-19 and other hazards

The first research question is: “To what extent have the respondents been exposed to COVID-19 directly and indirectly, and to what extent have they been exposed to previous hazards before the pandemic?”

Studies find that negative COVID-19 impacts are influenced by the level of exposure to COVID-19, measured indirectly (such as as the level of infection in society, and/or the level of COVID-19 restrictions), or directly (such as being infected with COVID-19 or losing someone close). These types of exposure influence both physical and mental health outcomes and material outcomes. Wang et al (2020) report for instance of more negative psychological impacts among people living in areas with higher COVID-19 infection risk (suspected/confirmed cases, living in hard-hit areas).

Disasters do not affect all individuals evenly, and previous research indicates that some people end up paying a higher price when experiencing disasters, due to pre-existing conditions that influence their vulnerability (Bizarri 2012). This applies, for instance, to people who are homeless, people who are poor, people with psychiatric disorders, those with alcohol or drug abuse disorders, minorities, undocumented immigrants, and asylum seekers (Morris 2020)

Factors like mental disorders, physical diseases, low income, and economic insecurity, substance and alcohol abuse are generally more prevalent among socially marginalised populations (Gayer-Andersson et al 2020), and these are factors which increase the risk of negative psychological impacts related to COVID-19 (Wang et al 2020, Xiong et al 2020). The situation is particularly challenging for homeless people. In spite of the factors indicating higher risk of negative psychological impacts from COVID-19 in socially marginalised groups, there seem to be few studies focusing on the mental health impact of COVID-19 in these groups (Gayer-Anderson et al 2020; Wang 2020).

Additionally, some previous studies indicate that exposure to previous disasters make people more vulnerable when facing new disasters. Breslau et al (1999) report from a Detroit study involving over 2000 respondents that a history of any previous exposure to traumatic events was associated with a greater risk of PTSD, and that multiple previous events had a stronger effect than a single previous event. As socially marginalised people are more likely to have experienced several traumatic events, they are therefore at greater risk of PTSD related to the pandemic.



2.4 Factors influencing material outcomes of COVID-19

The second research question of the study is: “What are the material outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes?”

Over the pandemic period, due to the economic downturn in many countries, job security has decreased and many people have become unemployed and thus care services have become even more in-demand. Some of the key factors contributing to worse material outcomes of COVID-19 are described as follows:

Low economic status. Households with low economic status are more likely to struggle in coping with the COVID-19 pandemic (Rahman, Jian, Junrong, & Shafi, 2021). That is because those populations are more likely to have temporary and precarious job contracts, which are more likely to be terminated during the crises by the economic downturn during the crisis. Furthermore, these people could experience higher levels of distress and financial struggles due to exposure to the virus (e.g. due to medical costs and the inability to work while sick). The economic consequences of the COVID-19 pandemic have more severely impacted low-paid employees who are also at an increased risk of exposure (such as cashiers, public transport operators, caretakers). This mostly includes people with lower education and income levels (Gama, et al., 2021).

Exposure to COVID-19. Material outcomes are related to COVID-19 exposure. People who have tested positive for COVID-19 or are self-isolating are often unable to attend work if they do not have the opportunity to work from home or are too ill to do so (Raifman et al., 2021). Contracting COVID-19 may also lead to long-term financial strain - due to persistent symptoms, many patients are unable to return to work or, in some cases, cope with day-to-day living, meaning they become reliant on government support and social services (Aiyegbusi, et al., 2021).

Living arrangements. Material impacts are related to the living arrangements of the marginalised. Denser living arrangements in social housing or shelters, for instance, as well as precarious frontline work (e.g. shop personnel and bus drivers) often means higher chances for virus spread among these groups. Dense living arrangements often coincide with precarious frontline work in marginalised individuals. For example, in Denmark, numerous infection hotspots were recorded in social housing units where many of the inhabitants are also frontline workers (Country Coordinator Denmark, 2021). Affected individuals bore considerable material loss, as avoiding contacts in crowded conditions is hard and they were not able to attend work upon contracting COVID-19. Staying away from work or even on sick-leave (if insurance is available) means losing income. The affected individuals come mostly from migrant and ethnic minority populations (Ibid.) which also goes to prove that minority groups are facing bigger material implications.

Poor health status. Poor health, including chronic disease, can be impoverishing even without the context of a pandemic, and often results in social problems such as exclusion and additional physical health problems (Sapkota, Houkes, & Bosma, 2021). The COVID-19 pandemic has further exacerbated health-related socio-economic inequalities (Hacker, Briss, Richardson, & et. al., 2021). Populations such as those of low socio-economic status or racial and ethnic minorities, have a disproportionate burden of chronic diseases, COVID-19 infection, hospitalisation, and mortality rates (Hacker, Briss, Richardson, & et. al., 2021). Poor health status is related to poor access to safe and affordable housing, healthy food, healthy working conditions, and healthcare (Ibid). For example, people with chronic conditions among poor and marginalised populations have faced difficulties in accessing healthcare and severe consequences both socially and financially from the pandemic (Singh, et al., 2021). The aforementioned inequalities can lead to poor health, which in turn, could



contribute to reduced income –often referred to as the health-poverty trap (Khullar & Chokshi, 2018). Not only is objectively diagnosed disease related to employment and income status, but so is one's perceived health status (Militaru et al. (2018). People with poor health perceptions are less active and have less disposable income, whereas people participating in the labour market and with more disposable income perceive their health status as better (Militaru et al. (2018).

Psychological predictors of material outcomes. Although not much has been written on the direct impacts of individual resilience levels on material outcomes of the pandemic, some linkages can be found. According to a survey conducted amongst vulnerable households in Hong Kong, psychological distress was strongly predicted by financial stress in the context of the pandemic (Zhuang, Lau, Chan, & et. al., 2021). As expected, employment status is related to the prevalence of economic fears and depression, contributing to individual functioning amidst the pandemic (Levy & Cohen-Louck, 2021).

Hypotheses related to material impacts of COVID-19:

- The level of direct/indirect exposure to COVID-19 influences the level of negative material impact. (Hypothesis 1).
- Compared to those living in their own home, individuals living on the street or in different types of facilities (e.g. homeless shelters, or longer term rehabilitation centres) can be expected to bear more negative material impacts. (Hypothesis 2)
- Respondents who report lower perceived health scores and/or have more diagnosed chronic illnesses also report more material losses related to the COVID-19 pandemic (e.g., loss of income, shelter, or food). (Hypothesis 3).

2.5 Factors influencing mental health outcomes of COVID-19

The third research question of the study is: “What are the mental health outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes? The outline of previous research is partly based on a manuscript submitted to the journal “Disasters” (Nævestad et al submitted).

In addition to the severe threats to physical health, the pandemic has also involved extensive psychological impacts on the general population (Wang et al 2020). This might be due to factors like restrictions, (e.g. lockdowns, quarantines, social distancing), economic hardships and loss of livelihoods, fear of infections and health impairments, and the loss of family members and friends. In a recent meta-analysis of the psychological impacts of the COVID-19 pandemic, involving 68 studies from 19 countries, Wang et al (2020) find an anxiety prevalence of 33% and a depression prevalence of 30% in the general population. This is in sharp contrast to the prevalence of about 4% for both symptoms of depression and anxiety among the global population before the COVID-19 pandemic (in 2015) (WHO 2017). Recent studies also report high levels of PTSD symptoms and high levels of COVID-19-specific worries (Gayer-Andersson et al 2020; Liu et al 2020).

Previous research indicates, however, that vulnerability characteristics tend to accumulate for marginalised groups (Lippert & Lee 2015), making them particularly vulnerable to negative psychological impacts of disasters in general and the COVID-19 pandemic in specific (Tsai & Wilson 2020). Factors like mental disorders, physical disease, low income and economic insecurity, substance and alcohol abuse are generally more prevalent among socially marginalised populations (Gayer-Andersson et al 2020), and these are factors which increase the risk of negative



psychological impacts related to COVID-19 (Wang et al 2020). The situation is particularly challenging for homeless people. Studies focusing on the prevalence of mental disorders before the pandemic report that between 60% and 93% of homeless people experienced mental illness (Schreiter et al 2017). Meta studies indicate that people with lower socioeconomic status generally experience more negative psychological impacts of the COVID-19 pandemic (Wang et al 2020; Gayer-Anderson et al 2020).

In spite of the factors indicating a higher risk of negative psychological impacts of COVID-19 among socially marginalised groups, there seem to be few studies focusing on the mental health impact of COVID-19 in these groups (Gayer-Anderson et al 2020; Wang 2020; Tsamakis et al 2021). Although we have not found empirical studies focusing on the psychological impacts of the COVID-19 pandemic on marginalised groups, previous research indicates that the vulnerability factors which tend to accumulate for socially marginalised groups are related to higher risk of negative psychological impacts. We sum up this research in the following section.

Psychological health. Psychological impacts of disasters are more negative for people with psychological diagnoses (Lee 2020). Previous research indicates high levels of mental disorders among socially marginalised groups in general, compared to the general population. International studies conducted in the last 20 years have found lifetime prevalence rates for mental illness of between 60% and 93.3% among the homeless (Schreiter et al 2017). Focusing on homeless populations in Germany, both those living on the streets and in shelters, the study of Schreiter et al (2017) finds first that homeless people had a mental illness rate 3.8 times higher than in the general population. Second, Schreiter et al (2017) conclude that the prevalence of substance-related disorders was 21 times higher than in the general population (2.9%), and that alcohol dependency was 22 times higher among homeless people in Germany, compared with the general population.

Physical health. Several studies find more negative psychological impacts related to COVID-19 among people with physical health problems (Disu et al 2020; Tsai and Wilson 2020). The meta-study of Wang et al (2020) also concludes that poor physical health gives higher odds of negative psychological impacts of COVID-19. One possible explanation for this is that people with poor physical health may be in risk groups, and/or that they feel more vulnerable to disease because of their poor health. People with physical health problems are often more exposed in disasters (Berawi et al 2021).

Homelessness and level of marginalization. As noted, we found no studies of the psychological impacts of COVID-19 for homeless groups. Morris (2020) concludes, however, that the psychological impacts of disasters are more negative for people living on the street, as these people tend to be vulnerable in several respects, related to e.g. mental disorders, alcohol or drug abuse. Tsai and Wilson (2020) also mention poorer access to healthcare.

Demographic factors. The meta study of Wang et al (2020) which focuses on COVID-19 related psychological impacts for the general population, concludes that the odds of anxiety and depression is higher among women than among men and among younger versus older adults (over 35 years).

Economic impacts. Studies find that negative economic impacts of disasters are related to negative psychological impacts (Kawohl and Nordt 2020; Jain 2020 and Gostin; Wiley 2020). Socially marginalised groups generally have a lower socioeconomic status, and studies focusing on the general population report that lower socioeconomic status, measured as income or education, is



associated with higher odds of psychological distress (Wang et al 2020). Wang et al (2020) also report that being employed is associated with lower odds of psychological distress.

Hypotheses on factors influencing negative mental impacts of COVID-19:

- Exposure to previous disasters influences the level of negative psychological consequences (e.g. PTSD related to COVID-19) (Neria et al 2008). (Hypothesis 4)
- Living arrangements influence vulnerability. The psychological consequences of disasters are more negative for people living on the street (Morris 2020). (Hypothesis 5)
- The psychological consequences of disasters are more negative for people with psychological diagnoses (Lee 2020) and physiological diagnoses (i.e. people in the risk groups) (Disu et al 2020; Tsai and Wilson 2020). (Hypothesis 6)
- People who are not national citizens (e.g. asylum seekers, immigrants, and people with undocumented status in the country), are likely to be more vulnerable to negative mental and material impacts in disasters, as they have fewer rights, and as they are likely to be underprivileged in several respects (e.g. with regard to legal rights, housing, economy, experiences with previous hazards) (Guadagno et. al., 2017; Weerasinghe & Taylor, 2015.). (Hypothesis 7)
- Individual resilience will be a crucial protective factor against disaster impact and against post-traumatic stress disorder (PTSD), depression, or other mental health problems (Agaibi & Wilson, 2005; Brewin et al., 2000). (Hypothesis 8)

2.6 Factors influencing the coping of social care organisations

The fourth research question is: “How have the social care organisations coped with the challenges of the COVID-19 pandemic, to what extent and how have they been able to help their clients during the pandemic?” The outline of previous research (featured below) is based on a manuscript published in the journal “Disasters” (Orru et al 2021c).

Analysing the factors influencing the resilience of aid organisations during the COVID-19 pandemic, we take the Pentagon model as our point of departure (Schiefloe, 2011). The Pentagon model (Figure 4) focuses on five key organisational aspects: 1) Structure, 2) Technologies, infrastructure and equipment, 3) Culture, 4) Interaction, and 5) Social relations and networks (Schiefloe, 2011). The first two focus on formal aspects of organisations, while the three latter focus on informal aspects.

1) *Structure* refers to defined roles, responsibilities, and authority in the formal organisation, but also includes defined procedures, regulations, and working requirements. Aid NGOs are often part of a larger organisational network of branches, headed by a central organisation, and often rely on voluntary work-force.

2) *Technology* denotes the equipment, tools and infrastructure that members of the organisation are dependent on or use to perform their activities. In a care institution this will include the physical buildings and rooms that are used, and hygiene facilities to protect against infection transmission.

3) *Culture* refers to factors like shared concepts, values, norms, knowledge, and established expectations related to common “ways of working.” The shared ways of thinking (also related to



identities and emotions) and acting provide a basis for interpreting the world, and (re)created in social interaction, motivate and legitimise actions (Schein, 2004).

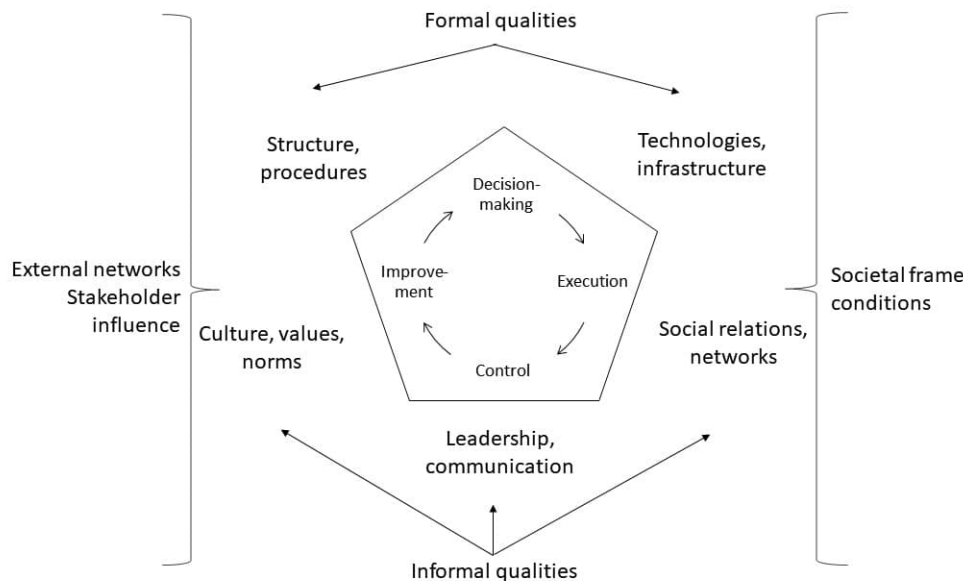


Figure 4: The Pentagon model with key organisational aspects of Structure, Technologies, Culture, Leadership, and Social relations and networks (adapted from Schiefloe, 2011).

4) Social relations and networks refer to the informal structure and the social capital of the organisation. Keywords are trust, friendship, access to knowledge and experiences, informal power, alliances, competition, and conflicts (Rolstadås et al., 2014). Quality and availability of personnel is a key factor here. A situation like the pandemic will often involve lower numbers of actively working staff because of the lockdown health security measures, as well as the decreasing levels of economic resources (Nisanci et al., 2020), fear of infection, and burnout (Sim & How, 2020).

5) Leadership and communication involve management practices, work processes, flows of information, communication, cooperation, and coordination. Previous research indicates that leadership is the most important factor influencing the organisational sustainability of the needs-based and demand-driven programmes often carried out by NGOs (Okorley & Nkrumah, 2012). Top managers play a central role in adjusting the managerial and operational levels (including their own leadership, competencies and styles) to deal with the abrupt and large-scale changes (Deverell & Olsson, 2010; Schein, 2004) and the need for out of the ordinary management and improvisation (Stern, 2009).

External framework conditions. We have divided framework conditions into four categories. The first is the external networks with other care organisations or state institutions. A crisis for an organisation can be described as a situation where an actor alone cannot handle a specific event based on the goals, capacities, routines and structures that the organisation must relate to (Deverell & Stiglund, 2015). Collaboration becomes a pivotal part of how organisations are expected to respond. Good relations that have been fostered before the crisis enable better organisational coping during crisis (Alpaslan et al., 2009).



The second external framework condition includes the national economic, legal, and political contexts. This refers to economic and other types of support from national and local authorities, social care providers, and NGOs. Previous research indicates that the availability of funds is crucial for successful NGO performance (Okorley & Nkrumah, 2012). However, next to financial security, there is a need for public recognition of the individuals in vulnerable situations and for the support organisations to facilitate their crisis response work (Oostlander et al., 2020b).

The third external framework condition is the social welfare context, which refers to the national unemployment level and national welfare level. These factors will influence aid organisations' abilities to help, as they influence the level of poverty and the help provided by the welfare state, which indicates the need for the societal help that NGOs can provide.

The fourth external framework condition is the level of COVID-19 infection in the studied countries/cities at given points in time. This is the ultimate indicator of the need for help provided by NGOs in society, as it provides a measure of the health status in society. Additionally, high levels of infection are generally accompanied by lockdowns and restrictions of activities, which involve higher levels of unemployed people and poverty. Lockdowns also resulted in less access to "traditional" social services/assistance, so there was more dependence on services that usually fill in the gaps.

2.7 The role of social capital

The fifth research question is: "What is the level of social capital in the studied groups, and what is the role of this social capital for them during COVID-19?" The outline of previous research is based on a manuscript submitted to the journal "International Journal of Disaster risk reduction" (Nævestad et al under review).

Social capital is defined as networks, norms, values and trust that entities (individuals, groups, society) have available and which may offer resources for mutual advantage and support and for facilitating coordination and cooperation in case of crisis and disasters (Morsut et al 2020). Social capital is usually traced through three modal dimensions - bonding, bridging and linking forms (Falk, 2018). Bonding social capital refers to relations between individuals who are similar to each other and emotionally close, such as friends or family. Strong bonding social capital proves useful in providing social support and assistance, especially during and after a disaster (Aldrich & Meyer, 2014). Bridging social capital allows for 'linkage to external assets', connecting individuals across various ethnic and racial groups, bringing together different groups in communities (Aldrich, 2011). Linking social capital connects regular citizens with those that hold positions of authority and power - those who often can distribute scarce resources (Aldrich, 2011). Strong social networks may also prove as a source of vulnerability during disasters, e.g. if members of the network engage in behaviours that increases exposure to hazards (e.g. refrain from using protective equipment, or are less involved in other protective behaviours) (Morsut et al, 2021).

There are several studies examining the importance of social capital in disasters, including COVID-19. Few of these examine, however, the importance of (different types of) social capital in the different phases of disasters, including the isolated importance of the different aspects of social capital (bonding, bridging, linking), explicating the analytical mechanisms through which social capital influence e.g. protective measures. We may, however, assume that the different aspects of social capital play different roles when it comes to peoples' experiences with the COVID-19 pandemic. This is shown in previous studies focusing on the role of social capital in disasters. Yamaguchi et al. (2017) study how different aspects of social capital influenced individuals' health and well-being after the Great East Japan Earthquake of 2011. This study reports that the level of



linking capital may be important *during* disasters, as peoples' (dis)trust in authorities influence how they respond to recommendations and information from authorities during disasters. The study also reports that that bonding capital may be important *after* disasters, as people seek comfort from their family and friends in ways that can reduce negative psychological impacts.

The relevance of social capital for COVID-19 protective behaviours have been indicated in studies combining objective mobility data and data on trust/social capital, or different proxies of social capital (e.g. voting and newspaper reading) in Italy (Durante et al. 2020; 2021), in Europe (Bargain et al. 2020), in the US (Ding et al 2020; Barrios et al 2021) and in Japan (Kokubun et al 2021).

At the outset, we should assume that high levels of bonding and bridging social capital should be associated with higher levels of infections, as more social relationships are likely to produce more social interactions. We may refer to this as a negative causal analytical mechanism between social capital and COVID-19. Based on the research of Borgonovi and Andrieu (2020), we can assume that this can be due to two possible mechanisms. First, people with strong social ties (bonding social capital) are more likely to behave in accordance with governmental health advice because of **social pressure** and fear of stigmatisation. Second, people with high levels of linking social capital have higher trust in authorities, and are more likely to follow authorities' recommendations (e.g. to socially isolate). The focus of this hypothesis is related to **risk awareness**.

Social capital and social marginalisation. Despite the crucial importance of social capital in disasters, there are few studies examining the role of social capital in the COVID-19 pandemic, focusing on socially vulnerable groups. Such knowledge is a precondition of increasing marginalised groups' capabilities to deal with COVID-19 in specific and disasters in general. In a systematic review of the relationships between social capital and socioeconomic inequalities in health, based on 60 reviewed studies, Uphoff et al. (2013) concludes that people with a lower socioeconomic status generally have lower levels of social capital, and that lack of social capital is related to socioeconomic inequalities in health. Thus, socially marginalised groups have generally lower levels of social capital compared to the general population: they have fewer close relationships (bonding social capital), looser relationships with the different groups in their communities (bridging social capital) and lower levels of trust in authorities (linking social capital) (Uphoff et al. 2013) (cf. Shinn et al. 2007; Morris 2020; Wilson & Tsai 2020).

Hypotheses related to social capital

- Among the three groups of social care organisation clients included in the current study, we hypothesise that the people living on the street have the lowest level of (bonding, bridging, and linking) social capital (cf. Uphoff et al 2013; Morris 2020; Wilson & Tsai 2020). (Hypothesis 9)
- High levels of bonding and bridging social capital will enable people to cope better before, during, and after disasters, as this can provide them with social support (Borgonovi and Andrieu 2020). (Hypothesis 10)
- High levels of linking social capital will enable people to cope better before, during, and after disasters, as high levels of trust in authorities will give them better access to correct information and better access to help from authorities (Yamaguchi et al 2017; Borgonovi and Andrieu 2020). (Hypothesis 11).



2.8 Risk awareness related to COVID-19

The sixth research question is: “Which factors influence respondents’ risk awareness related to COVID-19”. The outline of previous research is based on a manuscript submitted to the journal “Risk Research” (Nero et al under preparation).

The BuildERS framework distinguishes risk awareness as a) a collective (groups’ and communities’) acknowledgment about a risk and potential risk preventing and mitigating actions, fostered by risk communication, and b) the Slovic’s tradition of considering risk perception as individual and intuitive judgment and the risk awareness that is shaped at group level.

Risk awareness and risk preparedness are also factors influencing vulnerability and resilience: people have to get information about risks and crises and they have to understand them and be able to act on them. The latter aspect is especially of importance here, as one can distinguish between (a) a conscious neglect of risk and (b) the inability to act according to a known risk.

Socially marginalised people (and especially homeless people) are more likely to be vulnerable to disasters in general and COVID-19 in specific, because of lower capacities to be personally prepared, less access to information and transportation, special medical and mental health needs, and lower trust in authorities (Morris 2020; Tsai & Wilson 2020). People experiencing homelessness often lack the ability to respond to public recommendations before and during a disaster (Morris 2020; Tsai & Wilson 2020). This might be due to lower trust in authorities’ information (Morris 2020), the sources of information available, and the interpretation of the available information being influenced by factors such as misperceptions or conspiracy theories (Borgonovi & Andrieu 2020).

Previous experience of hazardous events shows an important influence on risk perception – the greater the experience, the higher the risk perception (Babcicky & Seebauer, 2017; Bronfman et al., 2020; Kollmann et al., 2021). On the level of individuals, experience with the virus also stands out as a predictor of significantly higher risk perception (Dryhurst et al., 2020). “Proximity to danger by family members or friends diagnosed or with death confirmed by COVID-19 increased perceived risk” (Giordani et al., 2021), personally knowing someone who had tested positive had the same effect (Lu et al., 2021; Shiina et al., 2021).

In the context of the COVID-19 pandemic, not only do the **sources** of information have an impact on perceived virus-related risks, but so do the **exposure to information** and behaviours related to seeking information. Reliance on **television** as a source of information was unambiguously linked to perceived severity of pandemic risks (Entradas, 2021; He et al., 2021). Getting information from **medical doctors** was associated with higher risk perception (Entradas, 2021). People who had received information from their family members and friends or community workers also perceived more risk compared to those who had not (Dryhurst et al., 2020; He et al., 2021; Yang & Xin, 2020). Trusting and paying attention to **social media** as a source of COVID-19-related information had a decreased effect on perceived risk of COVID-19 (Entradas, 2021; He et al., 2021; Rothmund et al., 2020). Individuals with a lower income and low level of **education** were more susceptible to conspiracy beliefs about the pandemic, as were **racial and ethnic minorities** (Bavel et al., 2020; Romer & Jamieson, 2020).



Hypotheses related to risk awareness:

- Among the three studied groups, people experiencing homelessness are likely to have lower risk awareness related to the pandemic, as they are the most marginalised among the three groups (Hypothesis 12)
- Among the three studied groups, people experiencing homelessness are likely to have lower trust in authorities' information about COVID-19, as they are the most marginalised among the three groups (Hypothesis 13)

2.9 Protective behaviours related to COVID-19

The seventh research question is: "What kind of COVID-19 protective behaviours have the respondents been involved in, and which factors influence this?" The outline of previous research is based on a manuscript submitted to the journal "International Journal of Disaster risk reduction" (Nævestad et al under review).

Since the outbreak of the pandemic, various strategies have been suggested by governments to limit the spread of the disease. On the individual level, such strategies often involve self-imposed social isolation: avoiding contact with people outside your current residence. Second, strategies related to sanitation have been implemented. This includes, for instance, cleaning surfaces more regularly and recommending that people use disinfectants regularly when entering and leaving places. Third, other measures to avoid airborne spread of virus have also been implemented, such as the use of face masks. Fourth, other behavioural instructions have been implemented, such as to avoid hugs, handshakes, and other types of physical contact with people from outside the household.

Several studies examine protective COVID-19 behaviours in the general population (e.g. in China (Guo et al. 2020), the US (Moore et al. 2020), and Italy (Briscese et al 2020; Pedersen and Favero 2020)). Several types of protective behaviours may provide important ways of reducing the risk of COVID-19 infection (WHO 2020). Previous research indicates, however, that protective behaviours (e.g. self-imposed social isolation) varies substantially between different groups and individuals (McCarthy 2020; Moore et al. 2020; Pedersen and Favero 2020). Additionally, previous research indicates that some groups are generally less involved in protective health behaviours. This applies to various groups of socially marginalised people, such as people who experience homelessness, people who are poor, people with psychiatric disorders, alcohol or drug abuse disorders, minorities, undocumented immigrants, and asylum seekers (Morris 2020; Tsai & Wilson 2020; Gayer-Andersson et al. 2020; Schreiter et al. 2017). To the best of our knowledge, there are, however, few studies of protective COVID-19 behaviours among socially marginalised groups.

Borgonovi and Andrieu (2020) contend that adopting protective health behaviours requires the ability to acquire, interpret, act upon and share sound medical advice, and to filter between trustworthy scientific information, unfounded theories and dangerous and discredited news. This indicates the importance of risk awareness, trust and information sources as factors influencing protective COVID-19 behaviours.

Several studies indicate that there may be **demographic differences** in intent to adhere to social distancing. First, women report higher levels of social distancing than men (Pedersen et al 2020; Guo et al. 2021). Second, Pedersen and Favero (2020) find that older respondents (age 45 and older) indicate more social distancing, but that this difference may be mostly accounted for by differences in COVID-19 news attentiveness and COVID-19-related attitudes and beliefs. Third, they



conclude that education seems to have little association with social distancing. Assessing the importance of different factors predicting social distancing, Pedersen and Favero (2020) conclude that demographic factors are relatively poor predictors compared with individual attitudes and media habits.

Information sources. Referring to the research of Niepel et al. (2020), Borgonovi and Andrieu (2020) conclude that people who have accurate information are more likely to adopt health protective behaviours such as wearing a face mask in public, washing hands frequently, and avoiding unnecessary social contact. Previous research indicates that this is influenced by media consumption habits.

Social capital is a key variable influencing peoples' access to, and interpretation of information about COVID-19, and hence their engagement in protective behaviours like social distancing and social isolation (Borgonovi and Andrieu 2020) (cf. section 2.8).

Hypotheses related to protective behaviours

- Protective COVID-19 behaviours will be influenced by risk awareness, linking social capital and trust in authorities' recommendations. (Hypothesis 14)
- Comparing the three groups of clients of social care organisations, we assume that people living on the street will engage in less COVID-19 protective behaviours in general and self-imposed social isolation in specific, as we assume that they have lower levels of social capital than the two other groups, lower risk awareness and lower trust in authorities' recommendations to self-isolate during the pandemic. (Hypothesis 15)
- Protective COVID-19 behaviours will be influenced by demographic variables, and it will be higher among women and older respondents. (Hypothesis 16)
- Protective COVID-19 behaviours will be influenced by information sources. (Hypothesis 17)

2.10 Vulnerability and resilience related to COVID-19

Vulnerability is generally interpreted as being prone or susceptible to damage or injury (Wisner et al., 2004: 11). Research on vulnerability can be differentiated in two main perspectives on vulnerability. On the one hand, vulnerability may be seen as an intrinsic and stable characteristic of an individual, a group or a community. In this 'vulnerable groups' narrative, vulnerability is cast as a characteristic attribute of certain societal groups due to their specific conditions (Sparf, 2016; Tierney, 2019). According to this view, groups such as people with disabilities, elderly or those living in poverty are considered vulnerable and tend to be seen as such not only in specific events but in general. There are also strong arguments against taking such an approach due to its tendency of vulnerability determinism (Gabel, 2019). This approach tends to overlook that those who are often not considered vulnerable might become vulnerable due to certain situations they are in.

Vulnerability refers to an understanding of disasters as not just being the result of an extreme event, but of an extreme event interacting with a vulnerable society (Wisner et al., 2004). On the other hand, vulnerability may be seen as situational and relative, and thus dynamic, phenomenon (Hilhorst & Bankoff, 2004; United Nations, 2015). This view argues that vulnerability is often in flux and cannot be reduced to a single metric to classify (Adger, 2006). This dynamic perspective of vulnerability reveals two important aspects of vulnerability: (a) vulnerability is dependent on the exposure to the crisis, the interplay of circumstances and individual conditions including abilities to



respond without suffering, and (b) the interplay of different disadvantages which lead to a person being vulnerable, and how these factors of vulnerability change over time (Tierney, 2019). Vulnerability involves “a combination of factors that determine the degree to which someone’s life, livelihood, property and other assets are put at risk by a discrete and identifiable event (or series or ‘cascade’ of such events) in nature and in society” (Wisner et al., 2004: 11). As such, vulnerability can better be understood as a result of intersectional and interdependent factors that produce socially differentiated impacts. This is referred to as the situational character of vulnerability.

Building on this perspective, the BuildERS framework defines vulnerability as the dynamic characteristic of entities (individuals, groups, society) of being susceptible to harm or loss, which manifests as situational inability (or weakness) to access adequate resources and means of protection to anticipate, cope with, recover and learn from the impact of natural or man-made risks. The BuildERS framework understands vulnerability as a characteristic of potentially any individual at a certain point in time, when they fall into a situation that renders them vulnerable. BuildERS aims to find out more about those situations that render individuals vulnerable. In its approach, BuildERS starts from the currently widely used definition of vulnerable groups (e.g. persons with mental and/or physical disabilities, the poor, the elderly etc.), and takes a look at the diversity within them in order to find out which situations there are, that make individuals vulnerable.” (Morsut et al 2020, p.32).

An intersectional approach to vulnerability assessment is needed as one’s exposure and the interplay of different disadvantages may lead to a person being vulnerable to different extents at different points in time and space (Morsut et al 2020; Kuran et al 2020). This approach helps to differentiate between the specific ways in which structural factors such as socio-economic inequality, inadequate preparedness policies as well as situational and temporal aspects may exacerbate vulnerabilities in, for instance, specific socio-demographic groups. To what extent a person with a certain impairment becomes vulnerable depends on the specific situation (hazard, strength, point in time, duration) but also on existing social structures and the extent to which those empower the person (Gabel, 2019; Mechanic & Tanner, 2007; United Nations, 2015; Wisner et al., 2004).

Resilience is derived from the Latin word *resilire*, which means to bounce back, jump back (Alexander, 2013). In psychology, it is used to describe the ability to adapt and deal with difficult events. However, the concept is not limited to the mental state of individuals, but is also used to describe the adaptability and resources in dealing with crises of social groups, like organisations and societies. BuildERS sees resilience as the processes of proactive and/or reactive patterned adjustment, adaptation, and change enacted in everyday life, but, in particular, in the face of risks, crises and disasters. As for the resilience that a state or organisations can enable, there are important considerations when it comes to whether individuals can expect the state to deal with crises on behalf of the individual or if individuals can expect the state to just enable and facilitate individuals’ ability to deal with their own risks. This discussion becomes crucial when the state or an organisation aims at helping vulnerable groups. (Morsut et al 2020 p.65). Similar to vulnerability, resilience is considered a dynamic concept. In this regard, specific measures to increase resilience might not benefit everyone and might even raise new challenges for others.



3. Methods

3.1 Quantitative survey

3.1.1 Recruitment of respondents

The paper focuses on the experiences of socially marginalised groups in thirteen European countries from March 2020. Respondents were mainly recruited in the second half of 2020, and asked to rate their experiences with COVID-19 since March 2020. The principles of recruiting the respondents are set forth in detail in the Pretest Report (cf. Orru et al 2020b).

The current study was approved by the Norwegian Centre for Research Data, and similar institutions or research ethics committees in all the other countries participating in the study. The studied groups are clients of the Salvation Army¹ or similar social care organisations, using services ranging from soup kitchens to homeless shelters and care facilities where people live for longer time periods. Thus, the included respondents range from people living in their own homes to people living on the street. Respondents were recruited when they visited the social care organisations. Most of the respondents were recruited and interviewed through the Salvation Army, but also other social care organisations. The interviews were mainly conducted face-to-face, in calm and private areas within the institutions. Due to COVID-19 restrictions, however some interviews were also conducted outside. The interviewers were given training focusing on ethics and practical survey issues by the BuildERS partner IZEW (International Centre for Ethics in the Sciences and Humanities, at the University of Tübingen in Germany) and SAL (Salvation Army in Brussels).

The social care organisation staff invited individuals to participate in the survey interview through general announcements and requests. Respondents were informed that no negative consequence would come from rejecting the invitation; participating in the survey was presented similarly to other voluntary activities of the Salvation Army. This information was also conveyed in the information sheet given and/or read to the interviewee in their native language. To mitigate any dependency and implications on future relations, participants were also given the choice to opt for Salvation Army staff from a different service centre to conduct the interview. Additionally, service users were able to express a preference for a male or female interviewer.

Interviewing participants about sensitive topics such as experiences of hazards and threats may cause participants distress and discomfort but may also have positive and therapeutic effects from reporting their experiences to third parties. Therefore, during the interviews, special skills, reflexivity and techniques were used to ensure that the participants did not get harmed in any way. The interviewers were trained in these techniques in the specific training that was provided to them in the project. In addition, all interviewers were trained on how to ethically recruit and interview service users in order to prevent an exploitation of social hierarchies or dependencies.

3.1.2 Survey themes

The following survey themes and their operationalization were set forth in Orru et al (2020b):

Background variables. The survey includes questions about sex, age, residence status (national

¹ The Salvation Army is a project partner in the current project, but we have also cooperated with other social care organisations in the data collection process.



citizen, asylum seeker, residing in the country without documentation etc.), whether respondents perceive that they represent a minority.

Living arrangements. We mainly focus on the level of protection provided by living arrangements as a source of social marginalization. In order to capture respondents' level of protection provided by living arrangements, we use the Framework for Understanding Homelessness on a Global Scale (Busch-Geertsema et al., 2016). The framework allows to classify the people without accommodation, people living in temporary or crisis accommodation and people living in severely inadequate and/or insecure housing. We ask respondents: "Where have you been living and sleeping most of the time over the past year?", and we divide the answers on three alternatives: 1) My own home, 2) Centre/facility, 3) Street or temporarily arrangement. The category "Street or temporarily arrangement" is comprised of the alternatives: Street or other open space, Car, with friends or relatives on a temporary basis, Hotel, motel etc., Trailer or tent, Abandoned houses and homeless hostel. Centre/facility is comprised of: Rehabilitation centre (people with drug or alcohol problems, resocialization after prison), Facility for migrants. We also ask respondents about years living without home and years as a social care organisation client.

Psychological and physiological health. We apply Nikoo et al's (2015) enumeration of the frequent physical and mental illnesses among individuals in precarious material situations. In the survey we asked: "Have you ever been told by a doctor that you have any of the following conditions?" We provided 15 different answer alternatives for the respondents, comprised of different physiological and psychological diagnoses. We made two variables of these. The variable "physiological diagnoses" concerns heart and lung conditions (i.e. risk group), while the variable "psychological diagnoses" include schizophrenia, depression and personality disorder.

Exposure to COVID-19. The survey measures exposure to COVID-19 in several ways. We asked respondents whether they have been infected themselves, whether friends have been infected, and whether they have lost someone close to COVID-19. We also measure exposure to COVID-19 as societal exposure, measured the country with the highest infection rate per inhabitant (i.e. Portugal). Additionally, we ask about material impacts of the pandemic: "The pandemic has had a negative effect on my income, access to shelter, food etc.?"

Experience with other disasters. The survey includes 16 questions about experiences with previous man-made and natural disasters "In the last ten years, have you experienced any of the following natural or man-made hazards?" (e.g. extreme heat, earthquake, wildfire, terrorist attack, war). We also ask respondents to rate the physiological and mental strain they experienced as a result of the disasters.

Protective COVID-19 behaviours. Respondents were asked: "Have you taken any of the following actions repeatedly during the pandemic period, in order to avoid getting the virus?" "Avoided contact with people from outside my current residence". "Washed myself more often", "Cleaned my living place more often", "I have taken other actions", Answer alternatives ranged from 1 (totally disagree) to 5 (totally agree).

Social capital. We measure bonding social capital with the following questions, based on Lin et al. (2019): "The following question concerns the support you receive from other private people (i.e. friends, family, colleagues, not people in organisations, like Salvation Army)." "I experience a lot of understanding and security from others", "I know a very close person whose help I can always count on", "I know several people with whom I like to do things". We measure bridging social capital with



the following questions, based on Buckner et al. (1988): “The following question concerns your feelings about the people in the area where you live.” “I regularly stop and talk with people in the area where I live”, “I feel like I belong to the area where I live”, “I am very attached to the local environment and landscape in the area where I live”. We measure linking social capital with the following questions, adapted from the ESS core: “I can trust police”, “I can trust social workers”. Answer alternatives ranged from 1 (totally disagree) to 5 (totally agree) for all the statements.

Risk awareness. We measure risk awareness by means of four statements. The first three statements were introduced with the following sentence: “Please indicate your agreement with the following statements about actions to avoid the virus (e.g. avoiding contact with people, washing yourself more often)”: “I haven’t thought about such actions”, “I don’t believe the virus causes me notable harm”, and “My life conditions do not allow me to do such things”. The fourth statement measuring risk awareness was: “Since March 2020, I have been afraid of being infected with COVID-19”. The survey also included: “I trust the information that the government of this country provides on the ways of avoiding COVID-19 infection.” Answer alternatives ranged from 1 (totally disagree) to 5 (totally agree) for all statements.

Information sources. Respondents were asked: “What have been the two most important sources of information for you on the pandemic? Please, name two sources.” Respondents could choose between 12 answer alternatives, e.g. television, newspaper, social media, friends, their own observations, police, social workers.

Psychological impact. We measure psychological impact of the pandemic by means of three variables: The first is: “The pandemic has had a negative effect on my mental wellbeing, or my mental health.” In these questions we rely on the United Nations University’s “Handbook for assessing loss and damage in vulnerable communities” (Van der Geest & Schindler, 2017). The second question is “Since March 2020, I have been afraid of being infected with COVID-19”. This is a question developed by the research team. Answer alternatives on these two questions ranged from 1 (totally disagree) to 5 (totally agree). Furthermore, the questionnaire delves into the psychological trauma caused by the pandemic using selected items from an adopted version of the Post-traumatic Stress Disorder (Bliese et al., 2008). The third variable measuring psychological impact is symptoms of PTSD because of the pandemic: “To what extent have you felt the following during/after the pandemic”: “I have recurring thoughts or memories of the pandemic”, “I feel sudden emotional or physical reaction when reminded the pandemic”, “I avoid thoughts or feelings associated with the pandemic”. Answer alternatives ranged from 1 (not at all) to 4 (all the time). We combined these three items into a scale (min: 3, max: 12). The internal reliability of the PTSD index was acceptable (Cronbach’s Alpha .71).

The survey also includes five questions about individual resilience: “Please, assess how often the following statements are true in your case. Provide answers that apply generally for the last year”: I am able to adapt to change, I tend to bounce back after illness or hardship, I can stay focused under pressure, I think of myself as a strong person, I can handle unpleasant feelings. Answer alternatives ranged from: “Not at all” (=1) to “Nearly all the time” (=5). We made a sum scale index based on the questions (min: 5, Max: 25).

3.1.3 Free text answers

The survey includes several free text follow-up questions, e.g. of mental health and mental wellbeing impacts related to COVID-19: “What kind of impacts related to mental health and wellbeing have you experienced because of the pandemic? Please state in your own words.” The survey also includes an-



open free text question, focusing on respondents' biggest problem (if any) during the pandemic: "Since the outbreak of the pandemic in March 2020, what has caused the biggest problem for you?" The purpose of this latter question was to let the respondents use their own words to describe this, independent of the focus and the pre-defined questions and answer alternatives in the survey. This would also allow a comparison of the significance of psychological challenges versus economical/material challenges. Analysing the free text answers, we used a thematic analysis to identify and describe the most prevalent themes.

3.1.4 Analyses

When comparing the mean scores of different groups, we use one-way Anova tests, which compare whether the mean scores are equal (the null hypothesis) or (significantly) different. We use Chi square tests to compare groups' scores on particular variables, if we, for instance, cannot compare means due to the variables' level of measurement. The chi square test tests whether the actual distribution of groups on a variable is statistically significant different from a coincidental distribution, or an independent normally distributed sample.

3.2 Qualitative data: interviews, workshops and document analysis

As the COVID-19 pandemic restricted the possibilities for conducting surveys in the participating countries in large parts of 2020, we decided to collect additional data in the ways that were available to us. This involved qualitative personal interviews and document analysis. After we had gathered majority of responses from Norway, Hungary, Estonia and Belgium, the authors carried out preliminary results validation workshops under WP6. The interviews and workshops were conducted digitally, as this largely was the only possible option under the circumstances of the ongoing COVID-19 pandemic. In some cases (e.g. Estonia) interviews could be carried out physically. We carried out interviews and workshops with staff of government services and NGOs (e.g. Salvation Army, Red Cross services) across 10 European countries - Germany, Italy, Hungary, The Netherlands, Norway, Portugal, Czech Republic, Finland, Lithuania, Estonia. In the country studies, a purposive sampling strategy was followed to capture experiences from organisations providing services including the following:

- Soup kitchens (and food banks) attended by homeless or those in need due to their material or psychological situation,
- Day centres that offer counselling, hygiene facilities for homeless and people in need,
- Temporary shelters including night shelters and refuges for individuals who spend their day-time elsewhere,
- Residential facilities – 24/7 services, including transitional housing, alcohol and drug rehabilitation activities, that a client attends up to several months.

Upon written informed consent, the **semi-structured interviews** with participants focused on: 1) the challenges introduced by the first wave of the pandemic, 2) how the organisation responded, 3) what helped or hindered responding and 4) what were the effects on the organisation's clients. Altogether 32 interviews (approximately 60 minutes each) were conducted within the period from May to July 2020. Key informants were determined on the basis of their level of experience and



involvement in solving the pandemic related influences on the care organisation. See for more details in the article in “Disasters” journal by Orru et al (2021c).

As background information for the interviews, we analysed documents including the state and municipal level government regulations in response to the pandemic, e.g. publicly accessible policy documents, and official guidelines. We looked for documents concerning the restrictions, changes in the availability of financial support as well as the care organisations’ responses to these factors. In addition, we analysed the media stories in major daily newspapers, which particularly related to the situation of vulnerable groups during the pandemic. Altogether 36 policy documents, 35 media articles and 28 other types of documents (e.g. reports on crisis response, statistics, care organisations) were scrutinised following the research questions.

Our research team members, who also carried out the interviews, shared the task of undertaking preliminary analyses of interviews and documents, with those in languages other than English being read and summarised into case studies by native speakers. For each country analysis there were two deliverables: answer sheet with brief answers to thematic questions about organisations responses and influencing factors; and a longer more detailed country study narrative. We then used qualitative thematic content analysis (Nowell et al., 2017) on the country reports to identify major commonalities and differences in the ways in which organisations have responded.

In order to understand the societal framework conditions that may affect the responses, we searched for statistics on the state’s welfare level (Social Expenditure, OECD, 2020), and the infection rate per 100 000 (ECDC, 2020) over the period of March to June 2020 as well as the dynamics in the unemployment level (Eurostat, 2020) over the same period. OECD Social Expenditure Percentage of Gross Domestic Product was the indicator used to measure countries’ welfare level. This indicator is suitable for our study because it considers social policy areas like old age, survivors, incapacity-related benefits, health, family, active labour market programmes, unemployment, housing, and other social policy areas. The infection rate per 100 000 was calculated based on the total cases reported monthly in 2020 and the countries’ total population in 2019. The raw data were provided by the European Centre for Disease Prevention and Control (ECDC, 2020). The unemployment levels were collected from Eurostat and represent the percentage of active population unemployed monthly in 2020 (Eurostat, 2020).

In order to validate the first results from the survey and interviews with care organisations representatives, the authors carried out 5 **online workshops** with the representatives of care organisations in Norway, Estonia, Hungary and Belgium from June to September 2021 (WP6 task). At the workshops, the study team members first introduced the findings from individual interviews and then asked for participants’ reflections on the findings from the perspective of their organisation. More specifically, the care organisations’ experiences of interacting with authorities during the pandemic and information-sharing, including tackling false information in promotion of virus mitigation behaviours were discussed. Good practices and opportunities for improvement were pointed out by the participants as the relevant feedback to our preliminary conclusions and recommendations.

3.3 Methods for deriving the policy recommendations

The second aim of the study is to extract the most viable observations for policy implications from the WP3 survey and interviews, and suggest these to be further elaborated as policy recommendations for vulnerability reduction of different social groups/ population strata and countries. When deriving the policy recommendations, we follow the same method as used in WP5



reports on resilience policy recommendations (Rhinard et al 2021). Thus, the description of this is in the following is based on the outline and method for policy recommendation development described in Rhinard et al (2021).

The policy recommendations were derived using a stepwise and iterative process. The first step consisted of reviewing the results from the WP3 quantitative survey and the WP3 qualitative interviews. When developing policy recommendations, we only focus on empirical results that are robust, meaning that they represent a consistent pattern across several indicators and measurement.

The second step entailed analysing the findings emerging from other WPs, especially the theoretical framework, concepts and previous research from WP1, to compare how our results aligned with and informed theoretical expectations. By contrasting the theoretical and empirical findings, and making cross-case comparisons, a nuanced and empirically grounded basis for developing the policy recommendations was established. The aim of comparisons was to explore if some of the findings were generalizable and to facilitate learning across cases.

The third step consisted of BuildERS reviews of the proposed policy recommendations, according to the criteria described in step 1 and 2. This involved consultations and discussion among key WP3 researchers, WP leaders (e.g. WP1, WP2, WP3, WP4, WP5, WP6) and other key BuildERS personnel. The cooperation with WP5 was especially important, and the process was also informed by recommendations derived from WP5's and WP6's efforts to 'co-create' findings with stakeholders via a series of systematic discussions and feedback sessions.

The 5 workshops in Estonia, Norway, Belgium and Hungary (described under 3.2) were a key venue of validating the preliminary findings and policy-recommendations.

The fourth step consisted of stakeholder reviews of the proposed policy recommendations. This was mainly done as members of BuildERS' Advisory Board reviewed the policy recommendations.

Based on the method described by Rhinard et al (2021), the main points when developing the policy recommendations are to consider recommendations in light of (a) their scientific grounding (i.e., are they solidly supported by our research?), (b) their approval by public and private stakeholders – bearing in mind not all societal voices were represented, and (c) their concreteness (i.e., can they be realistically implemented?). These are the principles used by Rhinard et al (2021).



4. Results

4.1 Characteristics of the respondents

In Table 2 we show the numbers and shares of respondents from the 13 different countries, including the share of female respondents in each country.

Table 2. Respondents from the 13 different countries, including the share of female respondents

Country	Number	Percent	Share of females
Estonia	61	19%	26%
Hungary	32	10%	48%
Norway	28	9%	43%
Portugal	52	17%	19%
Spain	20	6%	55%
Germany	13	4%	0%
Czech Republic	37	12%	27%
Finland	11	4%	18%
Denmark	4	1%	0%
Italy	7	2%	14%
Belgium	26	8%	23%
Netherlands	17	5%	6%
France	5	2%	40%
Total	313	100%	28%

Table 2 shows that there are eight countries with minimum 17 respondents, and that these eight countries make up 273 of the respondents. Three countries have fewer than 10 respondents. Low numbers in some of the countries participating in the study are largely due to COVID-19 restrictions, which have impeded data collection. Table 2 also shows that 28 % (n=88) of the respondents are female. Two of the respondents chose the third alternative “undefined” when reporting their gender.

Most of the respondents are recruited through social care organisations run by the Salvation Army (SAL), but in some countries we have also recruited respondents through social care organisations run by other NGOs.

In Table 3 we show respondents' answers to the question: “Where have you been living and sleeping most of the time over the past year?”



Table 3. Respondents' answers to the question: "Where have you been living and sleeping most of the time over the past year?"

Living arrangement	Number	Percent
My home	75	24%
Street or other open space	33	11%
Car	2	1%
Homeless hostel	104	33%
Rehabilitation centre (people with drug or alcohol problems, resocialisation after prison)	30	10%
Refuge for those fleeing violence (war, domestic)	2	1%
Facility for migrants	11	4%
With friends or relatives on a temporary basis	19	6%
Hotel, motel etc.	4	1%
Trailer or tent	10	3%
Abandoned houses	2	1%
Other (Please specify where you live most of the time)	21	7%
Total	313	100%

Table 3. Shows that 33% of the respondents have been living in homeless hostels while 24% of the respondents have been living in their homes during the past year.

To simplify, we combine the answer alternatives into five categories of living arrangements in Table 4. This table also includes mean scores for years living without your own home and years as a social care organisation (SCO) client. As noted, the respondents were recruited through different social care organisations, most of these through the Salvation Army.

Table 4. Respondents' answers to the question: "Where have you been living and sleeping most of the time over the past year?", distributed over four categories. Mean scores for years living without your own home and years as SOC client.

Country	Number	Percent	Years living without home	Years as SOC client
My home	75	24%	-	2.1
Homeless hostel	104	33%	4.3	3.2
Centre/Facility	43	14%	4.4	3.8
Street or temporary arrangement	70	22%	5.9	4.2
Other	21	7%	6.0	3.1
Total	313	100%	4.8	3.3



The category “Street or temporarily arrangement” is comprised of the alternatives: Street or other open space, Car, with friends or relatives on a temporary basis, Hotel, motel etc., Trailer or tent, Abandoned houses. Centre/facility is comprised of: Rehabilitation centres (e.g. drug, alcohol problems), Refuge for those fleeing violence (war, domestic), and Facilities for migrants.

Based on these responses, we decided to divide the respondents into three main categories of people: 1) Living in their own home (24%), 2) Living on the street, in homeless hostel, or under other temporary arrangement (54%) and people who 3) Live in centres or facilities (14%). The duration of stays in the third category may also be temporary, indicating that the main line of demarcation is between people living in their own homes and the other groups, which we may refer to as different types and degrees of homelessness. We define homeless hostel as temporary, as it generally only involves over-night stays, lacking stability, and as it therefore must be combined with other temporary living arrangements.

The studied groups vary from people using services like soup kitchens to people using homeless shelters and care facilities where people live for longer time periods. Thus, the included respondents range from people living in their own homes to people living on the street. While previous studies of vulnerable people like e.g. homeless people tend to focus only on people living on the street (Schreiter et al 2017), the present study focuses on a broader spectrum of vulnerability, focusing on marginalised people: 1) living in their homes, 2) living in social care centres/facilities and 3) living on the street or in temporary arrangements.

We also ask respondents how long they have been living outside their own home, excluding the respondents who are living in their own home. Table 4 shows that the respondents who report that they have been living on the street or in other temporary arrangements in the last year on average have been without their home for the longest time. The internal variation within this group is, however, considerable (SD: 7.8 years).

In Table 5 we show respondents' age distribution on six different categories.

Table 5. Respondents' age distribution on six different categories.

Age categories	Number	Percent
18-29	19	6%
30-39	48	15%
40-49	76	24%
50-59	85	27%
60-69	62	20%
70 or above	14	4%
Missing	9	3%
Total	313	100%

Table 5 indicates that about half of the respondents are between 40 and 60 years old, while 21% are younger than 40 years old and 25% are 60 years old or more.

In Table 6 we show respondents' residence status distributed on four different categories.



Table 6. Respondents' residence status distributed on four different categories.

Residence status	Number	Percent
National citizen	226	72%
Immigrant with residence permit	43	14%
Asylum seeker	5	2%
Residing in the country without documentation	16	5%
Missing/prefer not to answer	23	8%
Total	313	100%

Table 6 indicates that the majority of the respondents are national citizens, while 21% are immigrants with residence permit, asylum seekers, or residing in the country without documentation

In Table 7, we show respondents' answers to the question: "Would you consider yourself part of a minority (e.g. cultural, ethnic, health/disability related, sexual orientation)?"

Table 7. Respondents' answers to the question: "Would you consider yourself part of a minority (e.g. cultural, ethnic, health/disability related, sexual orientation)?"

Part of a minority?	Number	Percent
No, I am not	226	72%
Yes, I am	56	18%
Missing/prefer not to answer	31	10%
Total	313	100%

Table 7 indicates that 18% of the respondents consider themselves to be part of a minority. Respondents who answered yes were also encouraged to specify their minority category. Some of the respondents mentioned particular nationalities that may be minorities within countries, other wrote "cultural", "ethnic", or "my sexual orientation".

4.2 Experiences with the COVID-19 pandemic and previous hazards

The first research question is: "To what extent have the respondents been exposed to COVID-19 directly and indirectly, and to what extent have they been exposed to previous hazards before the pandemic?"

4.2.1 Experiences with the pandemic

Here we will provide an updated table for all the countries in the final version. Table 8 shows the level of infection per million inhabitants in the participating countries until July 31. 2020 and from August to December 2020. These periods largely cover the first and the second wave of COVID-19 in the countries. *Rates are presented in increasing order in the two periods.*



Table 8 The level of infection per million inhabitants in the participating countries until July 31. 2020 and from August to December 2020. Rates are presented in increasing order in the two periods. (data source: www.worldometers.info)

July 31. 2020		August - December 2020	
Hungary	462	Finland	5185
Finland	1344	Norway	7496
Czech Republic	1529	Germany	18439
Estonia	1552	Estonia	19492
Norway	1717	Denmark	25290
Denmark	2365	Italy	31393
Germany	2531	Hungary	32616
France	2617	France	33874
Netherlands	3114	Portugal	34860
Italy	4157	Spain	35080
Portugal	5302	Netherlands	42585
Belgium	5883	Belgium	49847
Spain	6546	Czech Republic	65676

The two periods largely cover the first and the second wave of COVID-19 in the countries. Table 8 indicates high infection rates for Spain, Belgium and Portugal in the first period we measure. Additionally, we see high infection rates for the Czech Republic, Belgium and the Netherlands in the second period.

The survey asks the respondents several questions about their experiences with the pandemic. We refer to this as their exposure to the pandemic: direct (whether they were infected themselves) and indirect (e.g. whether their friends were infected). First, respondents are asked whether they were infected with COVID-19. The shares of respondents in each country who were infected are presented in Figure 5 (left axis and red columns), which also includes respondents' average number of infected acquaintances (blue line and right axis.)



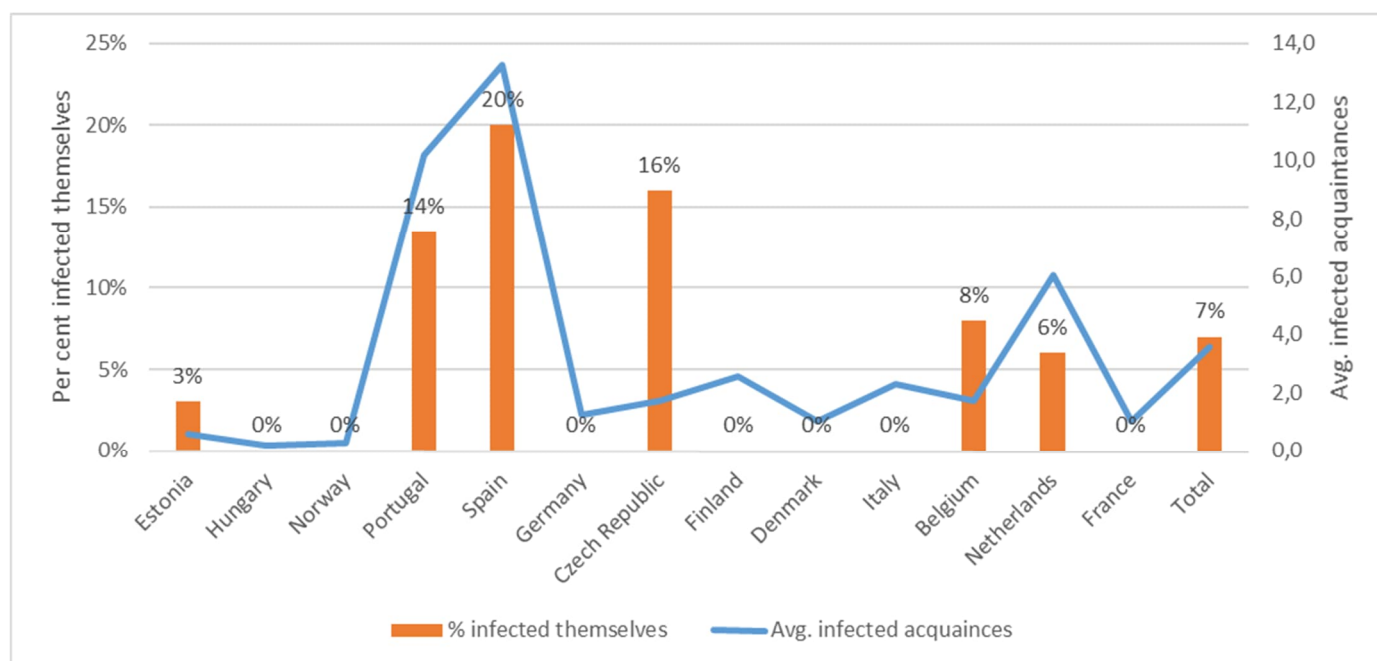


Figure 5 The shares of respondents in each country who were infected are presented (left axis and red columns) and respondents' average number of infected acquaintances (blue line and right axis), per country.

First, it is important to note that the numbers of respondents are relatively low for several of the countries (cf. Table 2). This means that the shares of infected respondents in several cases are based on very low numbers per country. The main purpose of the figure is, however, to illustrate the direct and indirect exposure to COVID-19 in the studied countries. A total of 22 of the 313 respondents (7 %) answered that they have been infected. Seven countries have no infected respondents. We see, however, that the average number of infected acquaintances is more than zero in most countries, indicating a more prevalent indirect exposure to the pandemic among the respondents. A total of 23 respondents (7%) reported that they had lost someone close to them due to the COVID-19 pandemic. These were from eight of the countries. As many as 45% of the Spanish respondents had lost someone close due to the COVID-19 pandemic.

4.2.2 Experiences with previous hazards

The survey includes questions about whether respondents have experienced a range of different man-made and natural disasters in the last ten years, and the physical and mental strain this involved. These questions are included to examine the potential influence of such experiences on the respondents' coping with the pandemic. Respondents were asked: "In the last ten years, have you experienced any of the following natural or man-made hazards?"

In Figure 6, we show results of respondents' experiences with previous hazards.



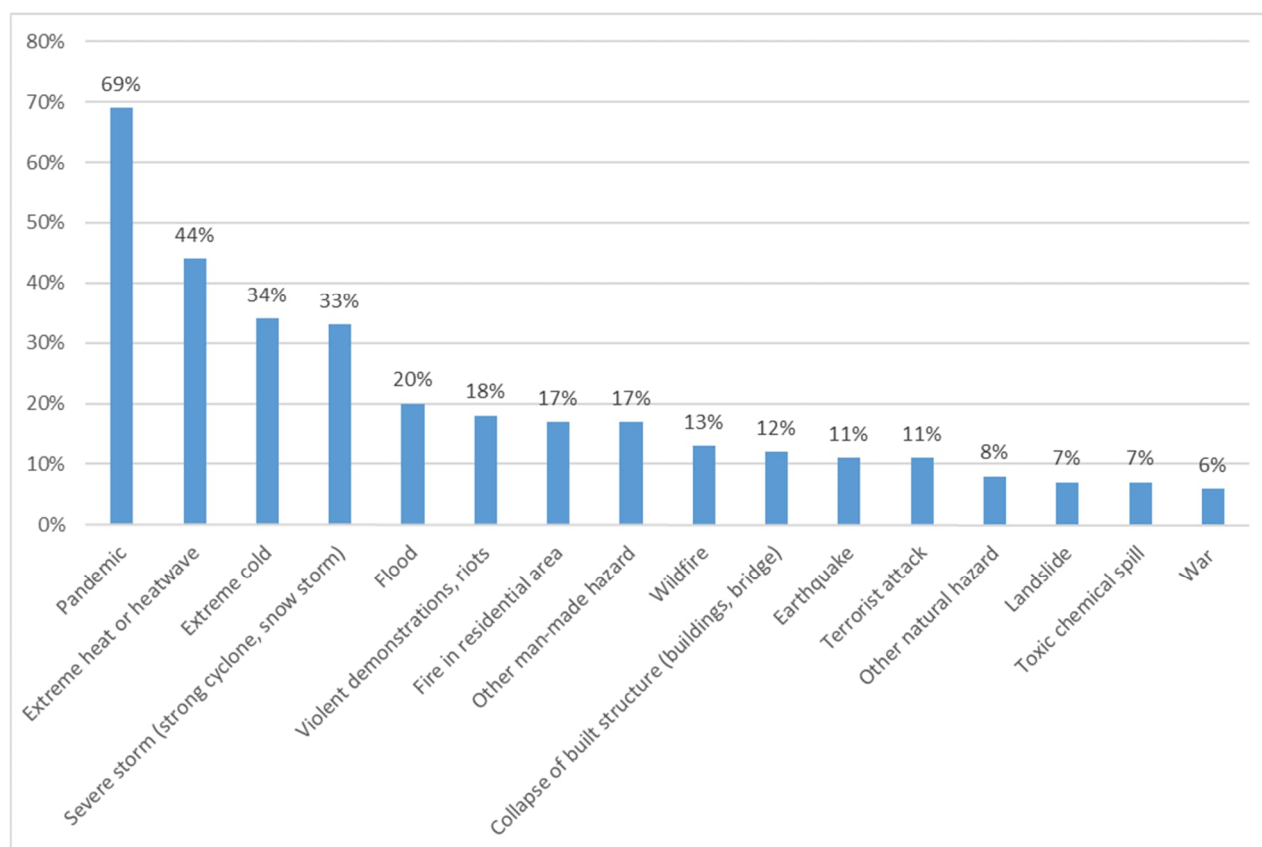


Figure 6. Respondents' experiences with different types of hazards in the last ten years.

Apart from the pandemic, the most prevalent previously experienced hazards in this sample are, extreme heat, extreme cold and severe storm.

Respondents were also asked about the level of strain experienced in the hazards: „How much physical/mental strain did this event put on you?“ Answer alternatives ranged from 1 (no strain at all) to 10(a lot of strain). In Figure 7, we show results for male and female respondents on these questions, for all the reported hazards.

Answer alternatives ranged from 1 (no strain at all) to 10 (a lot of strain).



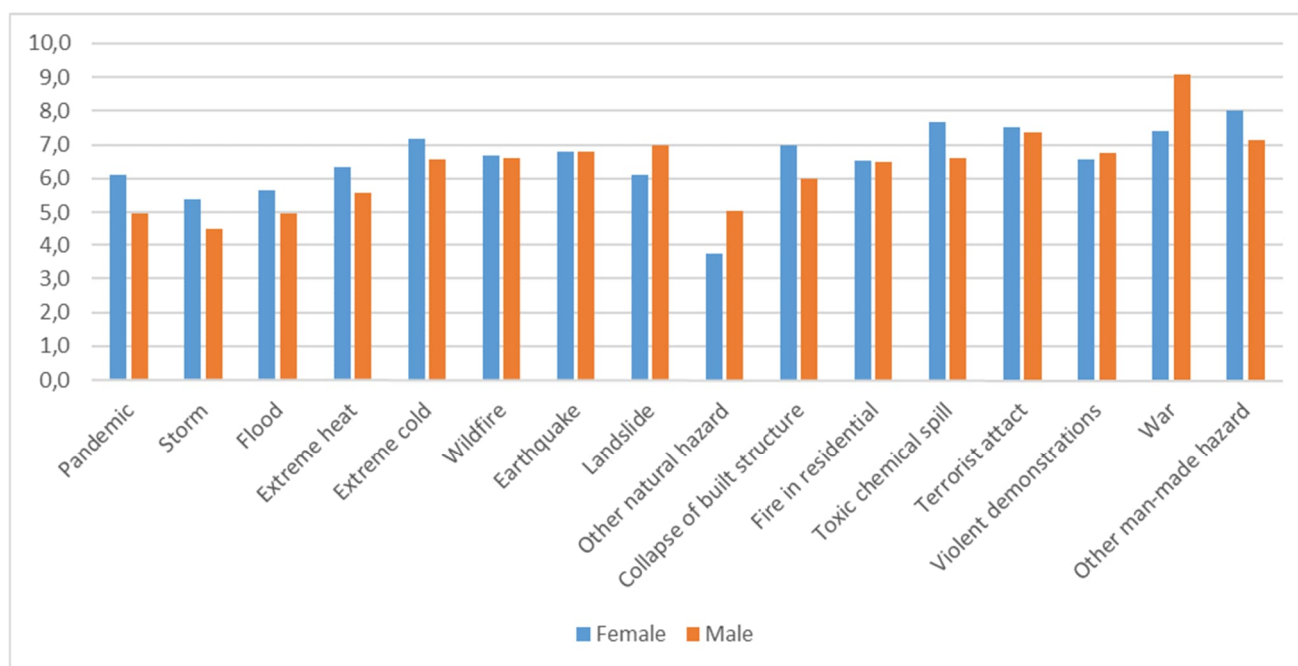


Figure 7. Answers of male and female respondents to the question 'How much physical/mental strain did this event put on you?' for 14 hazards. Answer alternatives ranged from 1 (no strain at all) to 10 (a lot of strain).

Figure 7 indicates that women who have experienced hazards generally report higher levels of strain than men in eight types of disasters (and in all of the four most prevalent hazards), while men report higher levels of strain in three cases. The difference is markedly higher for war, where male respondents report higher level of strain.

The exposure to previous hazards and the strain related to these are important, as some of these experiences are correlated with more negative effects of the pandemic on respondents' mental wellbeing and mental health. This means that respondents' experiences with some types of hazards make them more vulnerable to negative psychological impacts of the pandemic.

4.3 Material outcomes of COVID-19

The second research question is: "What are the material outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes?"

4.3.1 Main quantitative results

We focus on one main measure of material impacts in the study: "The pandemic has had a negative effect on my income, access to shelter, food etc.?" While 29% strongly disagreed, 15% disagreed, 13% neither agreed or disagreed, 23% agreed and 20% strongly agreed. Thus, we may conclude that 43% of the respondents agreed that the pandemic has had a negative effect on their income, access to shelter, food etc.

When we compare shares for the different living arrangements, we see that people living in their homes have the highest level of negative effects on their income, access to shelter, food etc. with 56% agreeing with the statement, compared with 40% among people living in centres/facilities and 38% agreeing among people living on the street or under temporary arrangements. A Chi-square test indicate that differences are not statistically significant ($p=0.272$).



Table 9. Bivariate correlation analyses testing hypotheses about relationships between key influencing variables and negative COVID-19 influence on income, shelter, food etc.

		COVID influence on income, shelter food
Backgr ound	Age	-.197***
	Sex (Male=2)	n.s.
	Immigrant, asylum seeker, without documentation (=2)	.212***
	Consider yourself a minority (=2)	.123**
Expo sure	Have been infected themselves (Yes=2)	n.s.
	Portugal/Spain/Czech (=2, others=1)	n.s.
	Portugal (=2, others=1)	.115**
Incom e	Formal paid work as main income (=2, other=1)	n.s.
	Informal paid work as main income (=2, other=1)	.109*
	Social benefits as main income (=2, other=1)	-.188***
Living arrang.	Living on the street or temp. arrangement (=2, other=1)	-.129**
	Living in facility or centre (=2, other=1)	n.s.
	Living in own home (=2, other=1)	.171***
Psych. and phys. health	Health assessment	n.s.
	Physical diseases (risk group)	-.098*
	Psychological diseases	n.s.
	Individual resilience scale (3 items)	-.142**

The table indicates a negative relationship between age and negative material impacts. This means that increased age is related to lower negative material impacts: the older you are the less negative material impacts you experience. The table indicates positive relationships between being an Immigrant, asylum seeker, or living without documentation, considering yourself a minority and negative material impacts. This means that these groups experience more negative material impacts in the pandemic. Only Portugal is significantly correlated among the exposure questions, indicating that respondents in this country, which had a high infection level before the survey was conducted experienced more negative impacts, probably related to COVID-19 restrictions on economic activities.

Comparing results for different main sources of income, we see a negative correlation between social benefits as a main source of income and negative impacts of COVID-19 on income etc. We see a positive correlation between informal paid work as main income and negative material impacts, indicating that this type of work was more impacted by the pandemic.

Looking at the different types of living arrangements, we see positive relationship between living in your own home and negative material impacts and a negative relationship between living on the street and temporary and negative material impacts. This indicates that the former group experiences the highest level of negative impacts of COVID-19, while people living on the street experienced the least negative impacts.

When it comes to physical and psychological health, we see a weak negative and significant relationship between physical health and negative material impacts, indicating that these



respondents experience fewer negative impacts. This probably applies to older respondents, living in facilities/centres, perhaps also with social benefits as a main source of income.

Finally, we see a negative relationship between individual resilience and negative material impacts indicating that respondents with a high level of individual resilience experience less negative economic impacts.

4.3.2 Main qualitative results

The survey includes an open free text question asking about respondents' biggest problem (if any) during the pandemic. The most common answer by people living in their homes was unemployment. The most common answer among people living in facilities on this question was restrictions on the freedom of movement. When answering this, people living on the street or under temporary conditions mentioned that because of the lockdown it was more difficult to get food, work and a place to be. It was also mentioned that the services previously provided to homeless people were closed, as were activities for people with alcohol and substance problems.

We also have results on mental impacts for social care organisation clients, based on the interviews with key personnel in the social care organisations. These are presented in the following, focusing on the three key groups that we compare in the survey.

Material impacts and influencing factors for clients living in their homes. Families in more precarious positions were hit hard by the change in economic situation caused by the pandemic. Households who were border-line coping before the pandemic, being able to take care of themselves and pay for accommodation, needing none or only some kind of support from social services, fell below the subsistence level and became so-called “new clients” of soup kitchens and social accommodation. These organisations experienced drastic surge in demand, and often these new clients challenged facing the shame of asking for help and the helplessness of being in a foreign country (See for more in Orru et al 2021c article in Disasters).

Material impacts and influencing factors for clients living in facilities. Restrictions of movement concerned residents of rehabilitation and transitional housing centres both outside and inside the facilities. However, basic material sustenance was granted for them and there was no change in their living conditions. In several cases staff described how they helped residents to get their usual products (e.g. gathering orders and shopping for clients) and even provided cigarettes or some alcohol to individuals with severe addiction.

Material impacts and influencing factors for homeless clients. Due to the closing down of shops and restaurants and less activities on the street due to self-isolation, some homeless lost their sources of income from begging and a temporary decrease of food sources from the leftovers of shops and restaurants. Clientele of day centres was denied access to the facilities when they had to close their doors thus leaving many homeless people without possibility to stay in warm room, cook a meal or use hygiene facilities (toilet, shower, washing machine). Interviewees also pointed out challenges in helping homeless people with clothes when they couldn't come to the premises of day centres.



4.3.3 Policy recommendations

- The newcomers to day-centres and soup kitchens (people at risk of poverty who still live in their own home) are a critical group which has experienced the greatest loss in incomes. Measures should be planned (in collaboration with care organisations and unemployment insurance authorities) to facilitate their quick return to employment or education for re-profiling, before they lose hope and confidence to get back on track with independent economic coping. It may be difficult for authorities to identify this group, but one possible approach could be to identify these individuals e.g. through the services of social care organisations, like e.g. soup kitchens and day centres.
- More stringent measures need to be planned and enforced to curtail unofficial jobs, since the individuals benefitting from these are hardest hit during the crises that bring along the economic downturn. When left without income and without unemployment insurance funds, these individuals may become clients of social services (the state or NGOs). Possible measures could be e.g. more stringent control over unofficial jobs, stronger enforcement of employment tax law, social campaigning to increase the employers' and employees' recognition of the insecurities of unofficial jobs etc.
- Crisis funds need to be allocated to migrants and the newly unemployed. Extra resources (material and human resources) need to be made available to address their material needs, at the outset of crises like the pandemic. Concrete examples could be e.g. meal vouchers, subsidized housing, professional training etc.

4.4 Mental health outcomes of COVID-19

The third research question is: "What are the mental health outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes?"

4.4.1 Main quantitative results

We focus on three types of psychological impacts in the study. The first was "The pandemic has had a negative effect on my mental wellbeing, or my mental health." While 23% strongly disagreed, 20% disagreed, 15% neither agreed or disagreed, while 27% agreed and 15% strongly agreed. Thus, we may conclude that 42% of the respondents agreed that the pandemic has had a negative effect on their mental wellbeing, or mental health.

When we compare shares for the different living arrangements, we see that people living in their homes have the highest level of negative effects on their mental health and wellbeing, with 47% agreeing with the statement, compared with 42% among people living in centres/facilities and 37% agreeing among people living on the street or under temporary arrangements. A Chi-square test indicate that the p-value is 0.144.

The second measure of psychological impact was the statement "Since March 2020, I have been afraid of being infected with COVID-19". The answer alternatives ranged from 1 (totally disagree) to 5 (totally agree). While 26% strongly disagreed, 23% disagreed, 14% neither agreed or disagreed, while 23% agreed and 14% strongly agreed. Thus, we may conclude that 37% of the respondents agreed that they have been afraid of being infected with COVID-19 since March 2020.

When we compare shares for the different living arrangements, we see that people living in their homes have the highest level of worry, with 44% agreeing with the statement, compared with 40%



among people living in centres/facilities and 34% agreeing among people living on the street or under temporary arrangements. A Chi-square test indicate that the p-value is .274.

The third measure of psychological impact was a PTSD-scale based on three items: “I have recurring thoughts or memories of the pandemic”, “I feel sudden emotional or physical reaction when reminded the pandemic”, “I avoid thoughts or feelings associated with the pandemic”. Answer alternatives ranged from: “Not at all” (=1) to “All the time” (=4). We made a sum scale index of the three questions with minimum value 3 (1*3) and maximum value 12 (4*3). Among the 140 respondents who answered all the three questions, 54% scored six points or higher on the PTSD symptom index, which means that they (minimum on average) sometimes experience PTSD-like symptoms related to COVID-19.

When we compare shares scoring higher than six points on our PTSD symptom scale among the different living arrangements, we see that people living in their homes have the highest share, with 72% agreeing with the statement, compared with 48% among people living in centres/facilities and 46% agreeing among people living on the street or under temporary arrangements. A Chi-square test indicate that the p-value is 0.011.

Table 10 Bivariate correlation analyses testing hypotheses about relationships between key influencing variables and variables measuring mental impacts of COVID-19.

		COVID influence on wellbeing and mental health	Symptoms of PTSD because of the pandemic	Worry about being infected
Background	Age	-.122**	n.s.	n.s.
	Sex (Male=2)	-.128**	-.178***	-.125**
	Immigrant, asylum seeker, without documentation	n.s.	.155**	n.s.
	Consider yourself a minority	.164***	n.s.	n.s.
Exposure to COVID-19	Have been infected themselves	n.s.	n.s.	n.s.
	Mean number of acquaintances being infected	n.s.	n.s.	n.s.
	Portugal/Spain/Czech (=2, others=1)	.145***	.162***	.218***
	COVID influence on income etc.	.354***	.263***	.132***
Previous	Experienced hazards: war, terror, earthquake, wildfire, fire in res.	.199***	.239**	n.s.
	Experienced wildfire	.124**	.215***	n.s.
Living arrangement	Living on the street or temporarily arrangement	n.s.	n.s.	n.s.
	Living in facility or centre	n.s.	n.s.	n.s.
	Living in own home	.142**	.260***	.100*
Psych. and phys. health	Health assessment	-.176**	n.s.	n.s.
	General worry about own health	.418***	.336***	.578***
	Physical diseases (risk group)	n.s.	n.s.	n.s.
	Psychological diseases	.225***	n.s.	n.s.
	Individual resilience scale (3 items)	-.254***	n.s.	-.131***
	COVID influence on wellbeing and mental health	-	.410***	.446***
	Symptoms of PTSD because of the pandemic	-	-	.358***



Table 10 indicates that the following variables influence *allthree* variables measuring negative mental impacts related to COVID-19: 1) Sex (i.e. women), 2) Country with high level of COVID-19 infection (i.e. Portugal, Spain, Czech Republic), 3) negative COVID-19 influence on income, shelter etc., 4) living arrangements (i.e. that you are living in your own home), 5) general worry about your own health.

When we only look at the variable COVID-19 influence on wellbeing and mental health, we also see that negative mental impacts are significantly correlated with considering themselves to be part of a minority. Negative mental impacts are also related to psychological diseases, indicating that respondents with psychological diseases are more severely impacted mentally. Another factor only influencing COVID-19 influence on wellbeing and mental health is respondents' physical health assessments. This means that respondents who assess their own health to be good experience less negative mental impacts of the pandemic. Finally, we also see that respondents who consider themselves to be part of a minority report significantly more negative impacts of the pandemic.

When we look at factors influencing only PTSD symptoms, we see that being an Immigrant, asylum seeker, without documentation is significantly related to this, the same is experiences with previous disasters. When we look at factors only influencing worry about COVID-19 infection, we see that there is a negative relationship with individual resilience, indicating that respondents who report of high levels of individual resilience also are less worried about COVID-19 infection.

4.4.2 Main qualitative results

The survey includes a free text follow-up question of impacts related to mental health and wellbeing: "What kind of impacts related to mental health and wellbeing have you experienced because of the pandemic? Please state in your own words." The most common answers among people living in their homes concerned depression and anxiety related to unemployment. Depression, anxiety and a feeling of hopelessness related to the pandemic in general without giving a specific reason for it was also mentioned. Some respondents reported a strong feeling of uncertainty related to what the future will bring, e.g. "whether the pandemic will ever finish" and "whether vaccines will come". Respondents were also concerned about not being able to travel to their home country. Being isolated and separated from your loved ones was also mentioned, along with fear of being infected. The most prevalent answer among people living in facilities was related to fear of becoming ill with COVID-19. The most prevalent free text answers provided by people on the street were related to stress and anxiety related to COVID-19 infection. Additionally, the behaviour of other people was also mentioned: People living on the street stated that other people have become more aggressive because of the pandemic. Isolation and unemployment were also mentioned.

We also have results on mental impacts for social care organisation clients, based on the interviews with key personnel in the social care organisations (Orri et al 2021c). These are presented in the following, focusing on the three key groups that we compare in the survey.

Psychological impacts and influencing factors for clients living in their homes. Managers of social services pointed out that individuals who were border line coping, or those fighting their addiction, or for their way out of social housing to independency were morally discouraged and lost hope for better future or fell back to their self-destructing habits.

"The closer a person was to self-management, finding a job and changing his life, the harder he took information about rising unemployment and economic downturn, he lost hope and turned to alcohol" (Interview at Tallinn Welfare Centre, 06/2020).



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Additionally, feeling of loneliness progressed over the time:

“I noticed that the hardest was being alone and not knowing what the future holds. I don’t want to call it depression, but a kind of exhaustion arose – I have to be alone, I cannot see my friends, how long do I have to be like this. /.../ It was much harder than not going to the shop or washing the hands.” (Interview at The Salvation Army Corps, Tallinn)

Psychological impacts and influencing factors for clients living in facilities. Staying inside their rooms was difficult for many. Despite the conditions, clients of residential settings with consistent care from social workers felt safer, and their sense of community grew stronger. While clients expressed disbelief and even protest at the beginning, news about the spread of infection amongst homeless travelled, causing fear and motivation to obey by the implemented rules. With an exemption of one case in Hungary, where the news of the virus in the facility generated aggression which had to be stopped by a police intervention, clients generally acted in a disciplined and cooperative way. In some cases, managers described the atmosphere in their establishment as even more peaceful than usual, no major conflicts and sometimes with gratitude expressed by the clients who appreciated staff taking care of them in the situation of fear and anxiety evoked by the threat of a virus. (See for more in Orru et al 2021c in Disasters journal)

Psychological impacts and influencing factors for homeless clients. Homeless people who usually received psychosocial assistance from day centres struggled to go without help from social workers as day centres function as “social arena” where they normally spend several hours a day. The crisis was especially challenging for people with mental illnesses and disabilities. Many in this group struggled to understand the situation and felt anxious and afraid. Lots of support and explanations were needed from the social workers to implement hygiene rules and to calm their anxiety and fear.

4.4.3 Policy recommendations

Our qualitative and quantitative results indicate that several factors influence the type and degree of negative impacts that the pandemic has had on socially marginalised people. There is a need for national and local authorities to be aware of these influencing factors. After identifying who is vulnerable and why, the next crucial step is to address the vulnerabilities and build capacities. We will provide some more concrete examples of this in the following recommendations.

- Recognise and focus especially on groups that BuildERS identified as having a higher risk of becoming vulnerable to negative mental impacts. This includes:
 - Women;
 - Migrants, asylum seekers, and individuals without documentation;
 - People who are more exposed to the hazard (e.g., people in virus hotspots like Portugal in the case of the 1st wave of COVID-19);
 - Individuals who have been exposed to previous hazards (e.g., wildfires);
 - People who have experienced negative material impacts of disasters (for instance, the people who have been negatively affected by the pandemic in terms of their income, access to shelter, food, or hygiene/health facilities);



- People living in their home who have a high risk of becoming vulnerable
- People with psychological diseases (depression, schizophrenia, personality disorder)
- Formulate strategies and create an action plan to address mental health outcomes for different segments of the population following a disaster.
 - In disaster preparedness strategies, consider formulating countermeasures to countermeasures. For instance, COVID-19 induced loneliness, created by social distancing demands, requires countermeasures for combating mental health related issues. In tailoring disaster response measures, a social impact assessment (considering material wellbeing, physical wellbeing, mental wellbeing, equity, and inclusivity) should be carried out at planned intervals. This can help in identifying vulnerable parts of the population.
 - Individual psychological resilience is a key protective factor in terms of psychological impacts of the disaster. Building individual resilience, including through enhancing personal psychological stress management skills and community and place attachment, is fundamental in mitigating the psychological outcomes of a crisis. This can be done, for instance, at schools, care organisations, and by social workers doing home visits.
- Public funding should support the enhanced assessment of vulnerability set out in BuildERS (based on the Vulnerability Assessment Tool featured in Orru et al 2021a). Vulnerability assessments should entail sources of psychological vulnerability.

4.5 How have the care organisations coped in providing support to the marginalised during COVID-19?

4.5.1 Main qualitative results

The fourth research question is: “How have the social care organisations coped with the challenges of the COVID-19 pandemic, to what extent and how have they been able to help their clients during the pandemic?” The outline of previous research is based on a manuscript published in the journal “Disasters” (Orru et al 2021c).

The first wave effects of the pandemic were mainly derived from the declarations of emergency situation and lockdowns by the national governments and the regulations imposed to prevent spreading of COVID-19. Organisations providing aid quickly made rearrangements that allowed for necessary services to be offered while remaining in compliance with government regulations. Based on our analysis, four key types of organisations could be distinguished according to their nature of services and the related re-arrangements due to the pandemic. Our evidence shows that inside these types, organisations followed largely the same adaptation patterns in all the studied countries:

First, soup kitchens (food banks) could no longer serve food inside their premises. As a response, often with the help of volunteers and private companies, soup kitchens transitioned from serving food on the spot to distributing packages on a pick-up basis or delivering it to homes. “We closed our soup kitchen at first” said the interviewee from Estonia, “but then we reminded ourselves what our organisation stands for and found ways to continue providing food for those in need,” (29.05.2020). Due to the increasing numbers of individuals with economic problems, and the halt of



existing sources for homeless such as begging and food leftovers from restaurants, the need for food support doubled or even tripled in some cases. As a Lithuanian interviewee put it: “Before we had to deliver for 60 individuals in one place, now the situation is as if we had to deliver food for 60 individuals in 60 places,” (08.07.2020).

Second, the most drastic changes appeared in day centres, which were closed to the clients. That meant the suspension of physical meetings to provide services like psychological support (counselling, therapies, social interaction with clients and staff), hygiene facilities (toilets, showers, laundry), activities (newspapers, TV, Wi-Fi, books), warm rooms (with possibility to use kitchen, make tea) as a response to the government restrictions. In physically closed day centres, communication, psychological assistance, instructions to apply for allowances and other support were given to the clients by phone or via internet (e-mail, Skype). New solutions such as Wi-Fi networks extended to outside of the shelter, phone-charging points, and laundry pick-ups were created to help clients. For example, in Estonia, a day centre provided clothes for homeless by taking description of what they needed by phone. Furthermore, many day centres transitioned to distributing food outside its premises. For example, a day centre in Norway got the food delivery running in just two days after the first lock-down. In addition, many care workers from day centres (Czech Republic, The Netherlands, Norway, Italy) changed the mode to operating on the streets, looking for the homeless to provide them with food, masks and other material resources (Orru et al 2021c).

Third, night shelters stayed open and, in many cases (Germany, Netherlands, Hungary, Czech Republic, Estonia), shifted to 24-hour service provision, in order to limit contacts among clients who usually freely go around outside. In many cases, the clients were provided material goods such as special food and cigarettes to curb willingness to leave for the streets (in Czech Republic, Estonia). In order to entertain clients who usually spend their days moving around, the managers provided books, colouring books and collections of old action- and war movies and necessary equipment for watching them. In a shelter in Portugal, a puppy was adopted to calm the clients.

Fourth, residential shelters stopped accepting new clients, but continued working. In order to protect the health of clients and staff, everyday life was rearranged, including the suspension of joint activities and one-to-one counselling sessions. While movement outside of the premises was limited for clients, facilities faced difficulties meeting social distancing requirements (lack of space and unsuitable structure of buildings e.g. common toilets). For the same reason, changes were made in working schedules to avoid unnecessary mixing of staff members.

All types of care organisations played an important role in the dissemination of reliable information on message boards, leaflets, and by phone to keep clients updated on the situation of the pandemic and government regulations. Overall, many countries (Germany, Czech Republic, Estonia, Lithuania, Italy, Hungary) faced a significant increase in demand for both food aid and accommodation. The latter was solved with opening of emergency shelters in some countries (Germany, The Netherlands, Czech Republic) while some homeless people had to stay on the streets in others due to overcrowded shelters or camps (Italy, Hungary). A much higher workload along with many of the employees and volunteers belonging to risk groups (elderly or with chronic diseases) brought about shortages in staff. Another common challenge in all countries was lack of personal protective equipment in the beginning of the crisis and higher operating costs due to the rearrangements of work, increase in services offered or number of clients, and additional disinfection.



Factors influencing the coping of aid organisations. Several factors influenced the coping of the aid organisations' abilities to provide relevant help to their users, i.e. their level of resilience. We first focus on organisational factors and then framework conditions (Orru et al 2021c).

1) Organisational structures to cope with high workload and stress. For the staff of all types of care organisations, but particularly for the temporary shelters and day centres, the extended opening hours and/or the introduction of additional services was physically exhausting and demanded extra workforce. Many organisations experienced shortages of personnel, partly due to quarantines in the early phase, and partly as high shares of the volunteers were relatively old and as thus were in the risk groups of being infected. Moreover, in the early phase the rosters involved risk of infection and/or quarantines ("everybody would meet everybody"). This was changed to minimise social contact between workers and increase resilience. On a positive side, in organisations in most countries, volunteers helped to fulfil the gaps left by staff in risk groups (older age or chronic diseases). By drawing on the resources and possibilities in the existing organisational structure, younger volunteers were recruited. Nevertheless, it was not always easy to find new volunteers. Regardless of some additional work-force, working at the verge of burnout was commonly reported among the members of staff in most of the running organisations. The intense work and worry about infection were mentally stressful, whereas supervision and psychological support from colleagues was limited. A source of emotional stress for operators was having to implement the closure measures and turn down the requests of clients.

2) Culture. The culture of the care organisations is an important facilitating factor that was mentioned by many of the interviewees from all types of organisations. Interviewees said that their actions and commitment to dealing with the crisis was guided by this common idea of mission of the aid NGOs in society – "to help vulnerable people in need". Some staff of social service centres, for example in the Czech Republic, also shared positive feelings of being able to put their Christian faith in action or feeling appreciated by their clients in a difficult period. In Germany, the interviewed staff members expressed their gratitude to be a part of the response and to be assisting the most vulnerable in their community.

3) Infrastructure and technologies. Interviewees generally reported that the physical facilities of day centres, temporary and residential shelters were unsuitable for a pandemic, e.g. with small rooms and people sharing toilet and hygiene facilities. A care centre representative in Budapest, Hungary, explained the space constraints: "At one point we had to recommend clients to stay on the street, forest or any outdoor areas since it was much safer there," (25.06.2020). In closed-up day centres, the transition to digital counselling enabled the staff to maintain contact with their clients in new ways. However, experiences with this were mixed, and it was not welcomed by all staff. This was indicated in the experiences of interviewees, who highlighted that social work is by essence not suitable to be done from distance.

4) Internal relations between clients and staff. Enforcing hygiene and distancing regulations in temporary and residential shelters was challenging as clients were somewhat negative and agitated in the beginning of the crisis, yet became increasingly more accepting of rules and grateful for the support. In the words of a social work centre representative in Tallinn: "We explained and explained ...and explained once more /.../ and this had finally a reassuring effect," (30.06.2020). In soup kitchens and residential premises in some countries, e.g. Germany, Netherlands, Norway, Finland and Estonia it was emphasised that the good relationships that they had with the clients was essential to get through with crisis messages and ensuring compliance with restrictions.



5) Leadership, communication and cooperation. In many cases, the organisation leaders relied on their long-term experiences in the field in adopting to the situation and finding solutions. As one of the Estonian soup kitchen representatives explained: “We have been in the field for 20 years, and we have seen other, even more severe crisis situations, and these experiences have helped to overcome also current difficulties,” (25.08.2021). Cooperation between different (types of) care organisations grew even stronger. For example, in Finland, collaboration was developed for the provision of food and clean needles for the homeless. In Lithuania, phones and a workspace for psychologists to establish a psychological help line were provided. In Norway, care organisations increased cooperation to synchronise food distribution in Oslo centre. In Hungary, the existing alliance of aid NGOs and government authorities was employed to coordinate the aid work.

We now turn from discussing organisational factors facilitating or impeding organisations’ coping to discussing the importance of external framework conditions influencing organisations’ coping with the COVID-19 situation.

External framework conditions. The public health and economic situation, the crisis management context, and in particular, insufficient or delayed support from the authorities challenged coping for all types of organisations. Confusing official rules, and lack of guidelines was repeatedly pointed out particularly by the representatives of temporary shelters. It was expressed that social care for homeless and other vulnerable groups tend to “fall in between” guidelines as these organisations are neither health institutions nor care homes. In the majority of cases the first impression was that the generally under-recognised groups had become even more invisible: “It felt like the city had forgotten us” (Helsinki, 09.06.2020).

In several cases, strong *advocacy* by social services helped to make their voices heard. From the beginning of the crisis, managers of social centres were confronted with policies and restrictions that did not account for the needs of social service centres and their clients. In several countries (Hungary, Czech Republic), aid organisations brought their concerns to their local government and asked for clarification regarding regulations and requested that the government provide protective equipment, financial resources to aid services and provide emergency accommodation for the homeless.

In some other countries, it was easier for the care organisations to get their needs across. E.g. interviewees in Germany and Norway, the countries with a stronger relationship between social services and the government noted that the authorities were open to requests of welfare organisations as they have an ongoing understanding of the needs of the populations they work with. These positive exchanges and clarity of information were vital for staff morale and led to them feeling equipped to disseminate accurate information to clients and knowing how to rearrange services in alignment with regulations. However, certain client groups served by organisations (migrants day centre) were considered by the local government only after the second wave of the pandemic, after a long lament (Norwegian workshop, 28.06.2021). Most notably, in Hungary, the government and humanitarian NGO coordination council was called to action to ensure that their professional activities were coordinated without overburdening any organisations, and that all assistance, including communication materials was provided to all parts of the country.

When it comes to *societal recognition*, it was pointed out in some interviews (Hungary, Czech Republic, Norway, Estonia, Italy) that general negative attitude towards homeless people in society worsened as they were stigmatized and seen as the spreaders of virus. Stark political resentment towards homeless culminated in the criminalisation of homelessness in Czech Republic and further



tightening of the bans on homeless staying in public places in Hungary. In Italy, some centres closed while others resisted and had to make their own arrangements without much support or guidelines from the state institutions.

Overall, the interviewed staff members (e.g. in Italy, Hungary, Czech Republic, Norway) pointed out that the pandemic revealed the structural inequalities that exist within the welfare systems towards certain populations. The pandemic aggravated the situation to some groups e.g. for migrants because they were not able to receive the same services (attendance and emergency support) due to their different legal status in e.g. Norway and Italy.

As for the *material support*, in many countries, donations from the communities and private companies as well as voluntary workforce were an important source of help. Finally, the fact that the beginning of the pandemic fell in the spring noticeably lessened its negative impact as it was not so cold to be outside when day centres closed down (Orru et al 2021c).

Outcomes of the pandemic for users.

First, the interviews revealed the multifaceted impact of the COVID-19 crisis to homeless people and clients of aid services. Clients of residential centres like rehabilitation or night shelters that reorganised to full provision felt most safe and taken care of.

Access to night shelters and soup kitchens (food banks) was mostly provided to all who required it, although numbers increased significantly, and sometimes doubled due to the new, “first time” clients (Finland, Estonia, Czech Republic, Norway). Those who were managing (with some economic hardships or difficulties with independent psychological coping) prior to the crisis, faced more difficulties due to the decreasing chances of returning to work, meeting with the social workers, and suspended access to day centres during the emergency situation.

Country-by-country differences appeared in the situation among the homeless clients of night shelters. Frustration appeared among the homeless because they lived the paradox of not being allowed to be on the street and having nowhere to stay, as they were often fined and removed by the police in Czech Republic and Hungary. This also occurred in Italy for the migrant groups living on the street.

In most countries homeless and other materially or psychologically fragile clients lost their usual access to day centres and its services - toilets, showers, entertainment, kitchen, washing machine etc., but also psychosocial assistance including counselling, therapies or other personal interaction with the staff. Those who were among the most fragile in these groups or who lacked means or skills to access digital counselling may not have reached out for help at all.

The loss of routine and social circle provided normally by the day centres and residential centres were another set of reasons for difficulties to bear the restrictions. Despite efforts to communicate with clients using phones and internet, social isolation and loneliness were described, more severely hitting those with psychological disorders.

Digital counselling was often not accessible due to lack of skills or access to internet. Certain client groups (like migrants, refugees, Roma) did not have the digital or language skills necessary in order to communicate using digital services (Norwegian workshop, 28.06.2021). Furthermore, it was difficult to help and reach substance abusers with information and guidelines as they are often difficult to reach and do not show up to their appointments (Norwegian workshop). In addition, it was



expressed that clients with more private problems or who were more closed in nature as well as new clients, might have not expressed their need for help by phone. On the positive side, many of the clients started to use the internet (e.g. using digital signatures, communicating via e-mail).

The psychologically fragile clients struggled the most due to increased fears and paranoias. Interviewed personnel expressed their worries that the impact on their emotional well-being increased in time.

4.5.2 Policy recommendations

Policy recommendations related to social care organisations. Different types of social care organisations faced different types of challenges and were affected to different degrees. It is important to be aware of this when developing preparedness plans, before crises occur, when responding to challenges, during crises, and when mitigating the outcomes of crises, after they have occurred. In the need to mitigate virus spread during the COVID-19 pandemic, the most drastic changes were experienced by organisations with rapidly changing clientele. In day-centres, the services were suspended or digitalised, while night shelters and soup kitchens had to broadly reorganise their work to minimise contact. Residential facilities with stable clientele were minimally affected by restrictions. Related to the above, we propose the following improvements:

- Facilitate crisis planning inside care organisations to be prepared for crises. This could perhaps be done via municipalities offering crisis planning workshops for care organisations. Such efforts involve to increase the understanding the risks related to the most likely hazards, as well as the factors of vulnerability and resilience (mapping partners). This involves following aspects:
- Assess and enhance care organisations' material preparedness for crises like the pandemic. In the context of a drastic surge in demand for services during crises, crisis funds, extra shelter space and other material support (e.g. protective equipment) needs to be provided to be able to continue safe services. This recommendation may apply to both municipalities and national governments, and it concerns to a large extent to make sure to include material preparedness for crises like the pandemic in the crisis budget.
- Assess human and financial resources (state or local government support) invested in care organisations and engage extra resources in order to maintain operations during increased surge in demand in crises, if needed. The pandemic experience demonstrated that care organisations have an unsustainable reliance on a largely overburdened, older-age and/or volunteer workforce. If insecure contracts and inadequate pay are the key reasons that care organisations are forced to rely on this kind of workforce (overburdened and voluntary), it may also be relevant to run recruitment programs to train more people for careers in care work, and guarantee secure contracts and adequate pay in care work.
- Foster collaborative internal relations between clients and staff during the preparedness phase to be able to cope with crises. This is important as the organisations with long-term trust networks with their clients adapted easier.
- Foster intra-organisational cooperation, for example, establish collaboration teams between state and NGO care organisations. Our research indicates that better coordination of social care efforts between the state social services and non-governmental care organisations enabled a better allocation of tasks and resources during the times of crisis.



- Involve the representatives of care organisations in crisis management planning to better consider the needs of their clients. This also pertains to engaging the representatives of care organisations in local and national crisis preparedness drills and table-top exercises.
- During crises, next to restrictions, consider measures to motivate individuals to refrain from putting themselves in danger, such as socialising during a pandemic. At times of need for isolation, entertainment and other alternatives to physical socialising need to be introduced. For instance, in Estonia, clients were allowed to leave the facilities for 1 hour, which helped them cope with the pressures of social distancing.
- If the crisis requires isolation, social care organisations (state and NGOs) should consider offering a combination of digital counselling and should be able to tailor physical solutions to keep individuals in isolation supported. Digitalised service formats limited the support offered to clients with poor access to the internet or a lack of digital skills. Likewise, the digital skills of the clients of care organisations needs to be improved in order to be able to benefit from digital services. Therefore, policy-makers should consider offering training in these skills to clients of social care organisations.

Another key set of recommendations regarding social care organisations are related to the external framework conditions of these organisations. Several of these can be influenced by authorities at different levels:

- Create clear guidelines and communicate them effectively. Avoid a lack of guidelines. Communicate official rules in a way that is clear to a general audience. Well-planned information-exchange between care organisations and authorities enables all parties to introduce the crisis management measures smoothly.
- Learn from the countries with a stronger relationship between social services and the government (e.g. Estonia, Norway, Germany), where authorities may be more open to the requests of welfare organisations. Of course, best practices will need to be tailored to the local context.
- Make psychological counselling available to the staff of care organisations (like other critical personnel) in order to be able to recover from the increased workload and increased client demand for psychosocial support during a crisis.
- Extend the social support system to allow social service personnel and volunteers to leave their children at day care centres (Schobert et al 2021: 83-84). This could be facilitated if social service personnel are defined/considered as part of “critical personnel” during crises (Norwegian workshop).
- Reinforce the discourses of tolerance and societal cohesion in society. Remember that general negative attitudes towards homeless people and ethnic minorities in society may worsen during a disaster. During the COVID-19 pandemic they have been stigmatised and seen as spreaders of the virus in many countries.

Policy recommendations related to the clients of social care organisations. Our results also show that different types of clients faced different challenges and were affected to different degrees. The outcomes of restrictions and rearrangements were worse for some types of marginalised groups than others, e.g. new clients, migrants, psychologically fragile clients and those with limited



communicative abilities. Future contingency plans should focus especially on these groups under challenging conditions.

Focus on the **“newcomers” of day centres and soup kitchens**. Some of the worst effects of the pandemic were experienced by the individuals that had to turn to care services for the first time. In the overwhelming crisis, they had lost of hope for re-entering the job market or for other ways of improving their situation. Thus, good collaboration and preparedness needs to be established between state and non-governmental social care and unemployment support to be able to swiftly respond to a sudden surge of demand for care and re-employment. This is to catch the unemployed right when they fall out of employment or education - before stress and material problems accumulate. Assess and be prepared for the need to extend the physical capacities of emergency shelters and care facilities to provide more opportunities for people experiencing homelessness (including migrants).

- More psychological counselling needs to be available to social care clients during and after crises. The psychologically fragile clients struggled the most due to increased fears and paranoias. Experiences of the pandemic indicate that social isolation and loneliness were described as more severely hitting those with mental disorders.
- Eligibility criteria of access to services, allowances and social benefits should be lowered in extreme situations like disasters. These barriers may make the situation even worse for groups like migrants, asylum seekers, and individuals without documentation. In the long-run, if these people are left unattended, the government will incur extra social and financial costs in the form of emergency room visits for non-urgent care and potentially even social unrest due to poor outcomes for these groups.

4.6 The role of social capital

The fifth research question is: “What is the level of social capital in the studied groups, and what is the role of this social capital for them during COVID-19?”

4.6.1 Main quantitative results

Figure 8 provides an illustration of the different levels of the different types of social capital in the studied groups.



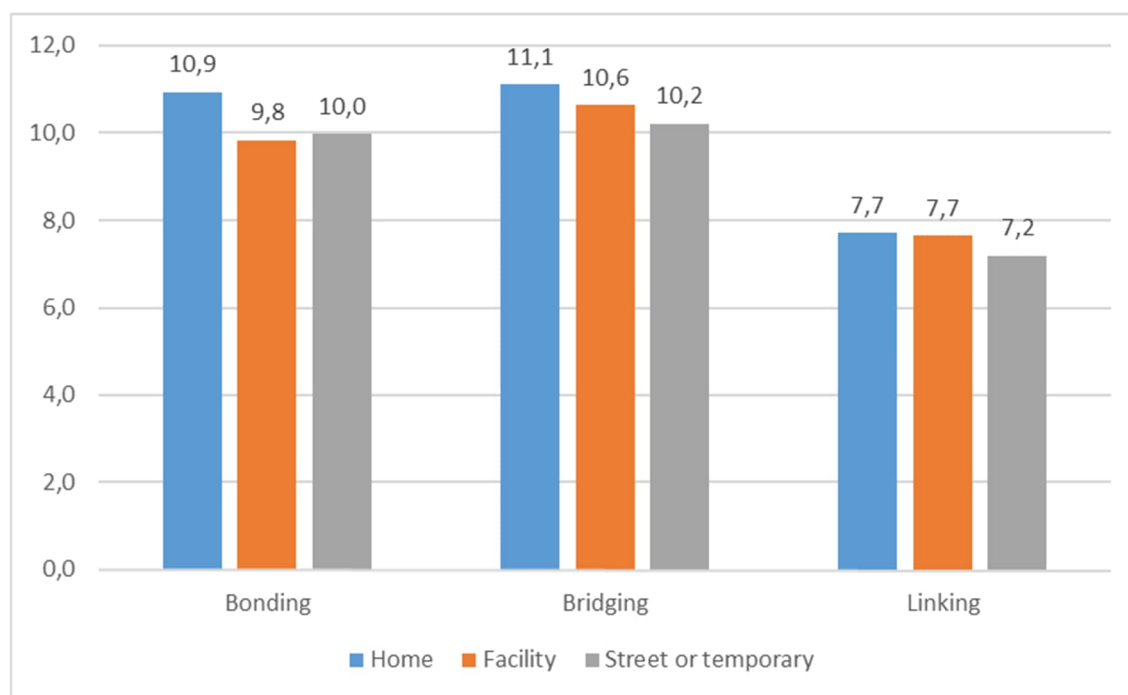


Figure 8. Mean scores of the bonding, bridging and linking social capital in the three studied groups.

Figure 8 indicates generally lower levels of all types of social capital among people living on the street and under temporary conditions. This indicates that people living on the street and under temporary conditions have fewer close relationships (bonding capital), are less attached to their neighbourhood and their neighbours (bridging capital) and have less trust in authority figures (linking capital).

In Table 11 we show the mean scores of the bonding, bridging and linking social capital in the three studied groups, and correlations between variables measuring social isolation, risk awareness, trust in authorities' information about COVID-19, whether they have received help from other institutions than the one which interviewed the respondent, during COVID-19. The following questions are included in the correlation analyses:

- Avoided contact with people from outside my current residence (isolation)
- I don't believe the virus causes me notable harm (harm)
- Since March 2020, I have been afraid of being infected with COVID-19 (afraid)
- I trust the information that the government of this country provides on the ways of avoiding COVID-19 infection. (trust)
- Besides help from the Salvation Army centre, did you get support [e.g. food, money, shelter] from other private people (e.g. relative, neighbour, friend) to deal with the impact of pandemic? (help priv)
- Besides the Salvation Army, did you get support from another organisation to deal with the impact of the pandemic? (help org)

Table 11. Mean scores of the bonding, bridging and linking social capital in the three studied groups.

	Home		Facility/Centre		Street & temp.			Correlations					
Capital	M	SD	M	SD	M	SD	p	Isolat.	Harm	Afraid	Trust	Help priv.	Help org.
Bonding	10.9	2.9	9.8	3.5	10	3.3	0.068	n.s.	n.s.	.18***	n.s.	.13**	n.s.
Bridging	11.1	2.5	10.6	2.7	10.2	2.0	0.06	n.s.	n.s.	.12***	n.s.	n.s.	n.s.
Linking	7.7	1.6	7.7	1.9	7.2	1.9	0.075	.21***	-.14**	.22***	.28***	n.s.	n.s.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In line with what is shown in Figure 8, we see lower levels of all types of social capital among people living on the street and under temporary conditions. The additional information provided in Table 11 is first that linking social capital is positively and significantly correlated with self-imposed social isolation (high levels of linking social capital is related to higher levels of self-isolation). Second, linking social capital is significantly related to our two measures of risk perception, indicating that higher levels of linking capital are related to higher levels of worry about COVID-19 infection and higher levels of disagreement with the statement that the COVID-19 virus will not cause notable harm. Third, we see that being afraid of COVID-19 infection is significantly and positively related to all the aspects of social capital. Fourth, Table 11 indicates that a high level of bonding capital is positively and significantly related to receiving help from other (private) people (e.g. relative, neighbour, friend) to deal with the impact of pandemic.

4.6.2 Main qualitative results

Interviews and workshops with the managers and staff of care organisations indicated several ways that social capital impacted the coping of the clients of these organisations in the pandemic. As day centres had to close down, their clients were the hardest hit being cut off from their support. This was especially challenging for people living on the streets or in temporary shelters when they lost access to warm room and hygiene facilities as well as to the psychological support and social interaction in day centres (Orru et al 2021c). Losing access to these contacts with their peers and members of staff was difficult also for those clients who lived in their own homes. In addition to struggles getting material support from day centres and soup kitchens, lack of social contact was stressful. One interviewee described their clients as being more afraid of the loneliness than of the illness. Access to the bonding social capital was often also limited when social distancing regulations kept relatives away from visiting in rehabilitation shelters.

Socially marginalised people living in long-term facilities and homeless shelters that switched to 24/7 provision were most protected from loneliness through continuous access to their peers and personnel in the shelter. Although there were limitations to their usual social interactions (e.g. closed joint rooms, cancelled therapies and events), they still benefitted from daily contact and care of social workers. Interviewees and participants of workshops described that there was expression of gratitude and appreciation towards the staff from their clients for the commitment to care despite the risks of the pandemic. In addition to good relations between clients and staff, feeling of solidarity among clients improved individual coping as well as general situation in accommodation units (Orru et al., 2021c).

Linking capital refers to trust in authorities and was pointed out as low in several cases. This manifested in problems with implementing the restrictions and protective behaviours appointed by the government. In one case, a newly opened soup kitchen had to be closed because the clients refused to abide rules of social distancing. Managers and staff of care organisations described



many activities they did to bridge this gap and enforce regulations. They printed out official requirements and rules, disseminated this information (e.g. distributed leaflets) and “explained, explained and explained” the content to their clients as one of the managers expressed (Orru et al 2021c). This process also had reassuring effect on the clients and strengthened bonding with care workers.

4.6.3 Policy recommendations

Our results indicate that higher levels of social capital are related to positive COVID-19 protective behaviours (linking capital) and receiving help from private people (e.g. relatives, neighbours, and friends) to deal with the impacts of the pandemic. BuildERS Deliverable 5.1, which communicates the overall policy recommendations of the BuildERS project states that social capital is one of the core components of the BuildERS goals – lowering vulnerability and raising risk awareness – while directly impacting upon the central mission of increasing resilience (Rhinard et al 2021). Social capital is, however, hard to engineer. It cannot always be directly improved through governmental intervention. It often relates to broad -- even historical -- structures in society. It might also relate to previous mistreatment by authorities, police, etc. in some groups. And even high levels of social capital do not guarantee optimum outcomes. WP3 research indicates that crises demanding social isolation (e.g., pandemics) can undermine individuals with high levels of social capital and can leave them more vulnerable, not least in psychological terms (Nævestad et al submitted).

Our results indicate that the consequences of social capital are complex and that different forms of capital matter to different kinds of people in different kinds of situations. For instance, in the COVID-19 pandemic, our results show that individuals with higher levels of linking social capital responded well to government edicts (i.e., social isolation, washing hands etc.) (cf. section 4.7), but struggled the most with mental health issues that can be alleviated with bonding capital (cf. section 4.3).

Similarly, social capital can be a double-edged sword, helping in-groups recover more effectively but at the same time slowing or halting the recovery of those with fewer social resources (BuildERS Deliverable 1.2, p. 46; Morsut et al., 2021 forthcoming). This is indicated by our result that people with higher levels of social capital received more help from other people (e.g. relatives, neighbours, and friends) to deal with the impact of pandemic. In general, investments should be made to improve relationships between socially marginalised people and people in their community, to increase acceptance and trust, as these relationships are important in crises, for instance in terms of individuals' ability to receive help and information. Investments in building social cohesion in preparedness phase may foster solidarity during crises, which would likely prevent suffering and save governments time and money in the long-run. Therefore, we propose these specific policy recommendations:

- Facilitate the formation of good relationships between care organisation clients and more diverse communities and groups, as these relationships form the foundation for a better understanding of the risks, crisis situation and guidelines. Policy-makers could possibly do this via community events focused on bringing diverse groups together to engage with each other. This could e.g. be cultural events that provide clear opportunities for strangers to engage with each other and make sure care organisations receive invitations encouraging clients to attend. Increasing attachment to the members of the community and the living area through communal events and inclusive planning creates the basis for community attachment. Community attachment is a key source of individual resilience as well as willingness to contribute to the common safety by following crisis guidelines.



- Facilitate interaction with peers and a larger community of people living on the street or under temporary arrangements, as their social capital is related to getting help from friends and relatives (bonding capital). This could be done e.g. by hosting events where the clients of various care organisations are invited to come together to share a meal and mingle (i.e., share experiences).
- Foster collaborative relations between care organisation clients and staff during the preparedness phase to be able to cope with crises. This is important as the long-term trust networks between care organisations and clients facilitate crisis communication (building awareness about risks and safe behaviour) motivates the clients' compliance with the crisis guidelines and contribution to common safety.
- In risk analyses and preparedness planning, consider various forms of social capital, including the accessibility and functionality of informal and formal support networks as the key factors of resilience.
- Fund or undertake research to better understand the link between different forms of social capital and crisis preparedness, risk awareness and resilience among marginalised groups and beyond. A better understanding of the role of the various forms of social relations is fundamental for tailoring specific measures for preparedness and response.

4.7 Risk awareness related to COVID-19

The sixth research question is: "Which factors influence respondents' risk awareness related to COVID-19?"

4.7.1 Main quantitative results

In Table 12 we show results for variables measuring social isolation, risk awareness, information sources and trust in authorities. The first three statements were introduced with the following sentence: "Please indicate your agreement with the following statements about actions to avoid the virus (e.g. avoiding contact with people, washing yourself more often)"

Table 12. Mean scores and standard deviations for risk awareness and trust in the three studied groups.

Risk awareness I:	Home		Facility/Centre		Street & temp.		
Actions to avoid the virus:	M	S.D.	M	S.D.	M	S.D.	p-value
1) I haven't thought about such actions	2.7	1.2	2.3	1.3	3.0	1.2	0.002
2) I don't believe the virus causes me notable harm	2.9	1.1	2.6	1.4	3.0	1.3	0.105
3) My life conditions don't allow such actions	2.4	0.9	2.5	1.1	2.9	1.2	0.003
Risk awareness II:							
I am afraid of being infected with COVID-19	3.1	1.5	2.9	1.4	2.6	1.4	0.052
Trust in authorities:							
I trust government information about COVID-19	3.6	1.1	3.9	1.2	3.0	1.3	0.001

Note: Answer alternatives ranged from 1 (totally disagree) to 5 (totally agree) for all statements

Table 12 indicates lower levels of risk awareness among people living on the street or under temporary arrangements. This group have thought less about preventive actions, are less likely to believe that the virus causes them notable harm and agree more that their life conditions prevent them from actions to prevent COVID-19. Additionally, people living on the street or under temporary



arrangements are less afraid of being infected with COVID-19, and they have lower trust in government information about COVID-19.

Table 13: Bivariate relationships between risk awareness, trust and influencing factors.

		Trust govern. COV-info	Worry about infection	Virus won't harm	Life conditions don't allow
Background	Age	n.s.	n.s.	n.s.	n.s.
	Sex (Male=2)	n.s.	-.125**	n.s.	n.s.
	Immigrant, asylum seeker, without documentation (=2)	.095*	n.s.	n.s.	n.s.
	Consider yourself a minority (=2)	n.s.	n.s.	.118**	n.s.
Expos.	Have been infected themselves (Yes=2)	n.s.	n.s.	n.s.	n.s.
	Portugal/Spain/Czech (=2, others=1)	n.s.	.218***	-.115**	n.s.
	Portugal (=2, others=1)	n.s.	.132***	n.s.	n.s.
Living arrang.	Living on the street or temp. arrangement (=2, other=1)	-.272***	n.s.	.206***	.206***
	Living in facility or centre (=2, other=1)	.181***	n.s.	-.110*	n.s.
	Living in own home (=2, other=1)	.149***	.100*	n.s.	-.138**
Psyc h. and	Health assessment	.101*	n.s.	n.s.	-.121*
	Physical diseases (risk group)	n.s.	n.s.	n.s.	n.s.
	Psychological diseases	n.s.	n.s.	n.s.	n.s.

The table generally indicates higher risk awareness and trust in authorities' information about COVID-19 among people living in their own homes (and people living in facilities) and lower risk awareness among people living on the street or under temporary conditions. Living in a country with a high infection level and assessing your own physical health as poor are related to higher risk awareness and higher levels of trust in authorities' information.

In Table 14 we show the six most prevalent sources of information about COVID-19 used by the respondents in three studied groups.



Table 14. The six most prevalent sources of information about COVID-19 used by the respondents

	Television	Social media	Radio	Social workers	Newspapers	Peers
Home	56%	29%	5%	8%	12%	12%
Facility/Centre	56%	21%	26%	12%	23%	12%
Street & temp.	51%	21%	18%	19%	14%	16%
Total	53%	23%	16%	15%	15%	14%
P-value	0.667	0.356	.007	0.068	0.238	.667
Correlations:						
Social isolation	.207***	n.s.	n.s.	n.s.	n.s.	n.s.
Dont' cause harm	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Afraid of infection	.212***	-.117**	n.s.	n.s.	n.s.	n.s.
Trust in government	.119**	n.s.	n.s.	n.s.	n.s.	n.s.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 14 indicates that television is the most prevalent source of information on the pandemic in all the studied groups, followed by social media. All groups have a high use of television as an information source. Looking at the specific groups, respondents living in their homes have the highest share of use of social media in addition to that. Respondents living in facilities have higher shares when it comes to use of radio and newspaper, while people living in the street or temporary have higher shares of reliance of social workers and peers as their sources of information, in addition to television. Chi-square analyses indicate that the differences between the groups' shares for radio and social workers information sources are statistically significant.

Table 14 also indicates bivariate relationships between use of the different sources of information and risk awareness, social isolation and trust in government. Two-tailed Pearson's tests of significance indicate that use of television as information source on the pandemic is positively related to social isolation, worry of infection and trust in government. Social media, on the other hand, is negatively related to worry of infection. Thus, we see opposite effects of television and social media on worry of infection.

4.7.2 Main qualitative results

The views of the social care organisations' staff on their clientele's risk awareness and perceptions about COVID-19 risk are addressed in detail in Nero et al (under preparation). We summarise some of the findings here. Compared to other client groups, the elderly people living at home and attending the day centres and soup kitchens were the most worried of the novel virus, being afraid to leave their home, struggling to get food. Senior clients of day centres did not return to these centres, even after the restrictions were lifted and the facilities reopened.

Among different client groups, worries among homeless people living on the street and in shelters were characterised as least strong among the groups we study. Interviewed staff members explained that there was a lot of disbelief in the beginning of the pandemic and reluctance towards the implementation of social distancing and other restrictions. Perception of risk increased as information about diseased and quarantined clients of shelters spread.

Migrant communities were a subgroup of clients that was particularly sceptical to the seriousness and even the reality of the disease. Their scepticism was partly due to their experiences with



previous hazards and/or having faced a trip involving risk to life, but also language barriers, low levels of integration and low trust in the authorities. Thus the qualitative data indicates that the risks of the coronavirus were difficult to communicate to migrants. This might also be related to a “hierarchy of needs” - if certain groups are unable to access consistent food, housing, safety, etc. then it might be unrealistic for them to waste time worrying about a disease that may or may not strike. So, they are aware of the risk, but it is not as high of a priority as other threats.

Worry about the virus also differed depending on the health status of people. Compared to people with pre-existing health conditions, healthy clients were less likely to recognise the dangers of the pandemic. People with mental health issues were repeatedly pointed out in the context of misbeliefs. They were prone to misinformation and had difficulties comprehending the situation leading to an underestimation of the risks in some cases, and conversely, in some cases they suffered from anxiety and panic.

Personal exposure to COVID-19 and the experiences of infected acquaintances were described as the factor increasing the clients’ perceived risks posed by COVID-19. When in some cases panic attitude was faced in the city areas with high infection rate, understanding the necessity of restrictive measures was challenging in the less affected countryside. Rumours about mild cases of illness among the homeless lowered their risk awareness and worry about the infection and vice versa, interviewees described several cases where suffering from severe symptoms led people who previously were strongly against vaccination to become advocates of vaccinations against COVID-19, and to promote adequate risk awareness.

Reaching socially marginalised people with correct information, was described as a main challenge in communicating about the pandemic in general. In opposite to the survey results of television being the most prevalent source of information, managers of the care organisations said that their clients often do not consume official media on TV, but rely on social media channels like Facebook or YouTube, where they come across misinformation. Although staff of the care organisations made a great effort in disseminating correct information, challenging misperceptions and misbeliefs were described as the key challenge. The effect of disbeliefs on risk awareness was aggravated by low trust in official government. (Nero et al, under preparation)

4.7.3 Policy recommendations

Our results show there are lower levels of risk awareness and lower trust in authorities’ COVID-19 information among people living on the street or under temporary arrangements. This is also related to less protective COVID-19 behaviours (cf. section 4.7) and subsequently less of a negative mental impact (cf. section 4.3), probably due to lower prevalence of social isolation (cf. section 4.7), focus on other more basic problems (e.g. finding shelter, food), or a lower baseline of mental health before the pandemic began.² Given that risk awareness motivates, or is related to, protective COVID-19

² It is conceivable that individuals experiencing homelessness had a lower baseline of mental health than marginalized people living in their homes before the pandemic began, due to a challenging life situation, problems related to physical and mental health etc. If you have a low baseline, it might not drop as much as for someone with a higher baseline. This is a hypothesis that might be examined in future research. The same applies to our “hierarchy of needs” hypothesis, i.e. that mental impacts of COVID-19 for people living on the street and under temporary conditions were less severe than for marginalized people living in their homes, as the former have more basic challenges than infection protection, e.g. finding a place to stay for the night and getting food.



behaviours, increasing risk awareness among people living on the street or under temporary arrangements seem to be a relevant policy recommendation.

BuildERS research confirmed that to reach vulnerable people, authorities must develop communication strategies better tailored to different audiences, their preferences, and their needs. A diversity of individual capabilities, motivations (e.g., attitudes and beliefs), traditions, norms, and habitual behaviour shape how information is received and acted on. These factors need to be addressed by crisis management communication strategies. Further, communication strategies should be adapted to different disaster types (e.g., natural, or man-made disasters; fast or slowly emerging crises). Additionally, the communication landscape is becoming increasingly scattered. Out of the many communication tools available, the most appropriate mediums to reach vulnerable people must be identified. For example, social media is increasingly used in crisis communication, considered an effective tool to reach diverse groups. At the same time, not all people have access to or are active on social media, hence this medium can complement but not replace other communication tools. There are no 'one-size-fits-all' solutions. Our research confirmed the importance of multi-channel communication (Hansson et al 2019; Orru et al 2020a; Jukarainen et al 2021; Bäck et al 2020; Latvakoski et al 2020).

However, all these challenges are more complex in an age of *information disorder* (the spread and consumption of misinformation, disinformation, and harmful information). BuildERS' results show how social media has allowed for instant and broad diffusion of misinformation and disinformation that has resulted in, for example, undocumented migrants refusing help in disaster situations (due to rumours linked to their legal status), people relying on ineffective measures to protect themselves from crises, and crisis managers being unable to identify who is most at risk in a crisis situation (owing to false help requests in social media, for example). Thus, BuildERS findings reaffirm the importance of understanding and addressing various forms of harmful information as part of broader efforts to reduce vulnerability (Hansson et al 2019; Jukarainen et al 2021; Bäck et al 2020; Latvakoski et al 2020).

BuildERS has found that vulnerable people are more prone to believe misleading and/or false information. Our findings showed that individuals with mental health conditions and/or brain disorders can be prone to believe misleading and/or false information (misinformation) (Jukarainen et al 2021). The same is true for individuals living on the street or in care facilities or those attending soup kitchens, drug and alcohol rehabilitation centres. Social workers and care organisations are thus needed to cope with misperceptions about the virus and vaccination in the COVID-19 pandemic. To that end, we propose specific policy recommendations:

- Allocate resources to increase the ability of the most vulnerable people to access, understand, and react to information over time (Hansson et al 2020; Hansson et al 2019; Bäck et al 2020; Latvakoski et al 2020). This could perhaps be done by getting information to intermediaries and asking them to communicate it to their clients. The points above help pinpoint which groups (e.g. migrant communities, homeless individuals) can be targeted with information, to increase possibilities for vulnerable individuals to access information. This should include language support and translation services to ensure that language barriers do not inhibit vulnerable individuals from accessing information.
- Crisis communication strategies need to consider and target vulnerable individuals to reach people living on the streets or under temporary arrangements and promote their health protective behaviours. This includes both supporting information channels (e.g. social workers) that get



through to these groups and developing communication means that are comprehensible and accessible to these individuals, who might have multiple different vulnerabilities.

- Crisis communication strategies should focus on building (in advance, as part of preparedness activities) cooperative relationships with the intermediaries of persons who have difficulties to communicate and/or interact, so that intermediaries can communicate the risk and crisis related information to vulnerable people in an appropriate and trusted way. This will increase the chances that vulnerable people will understand the risks and act upon them (Jukarainen et al 2021: 63).
- Crisis communication strategies need to include measures to empower information mediators (such as care organisations and authorities) with knowledge and materials to support their role as promoters of risk awareness among the vulnerable. This may involve training on how to communicate risk and crisis information to those who have weak or non-existing societal support networks and/or lack trust in authorities.
- State and local government authorities need to make sure that social workers have good access to official information. This is easier to organise in care organisations that have closer ties with authorities. Perhaps policy-makers could organise events or other opportunities to foster such ties.
- Different types of communication media need to be involved in the distribution of official information. In particular, targeting social media to counteract false information.
- Since risk and crisis communication is not a one-way street, care organisations could help identify which communicative materials are most useful to vulnerable persons in their care. The COVID-19 pandemic offers many lessons in how to inform people effectively, in ways that are easy to understand and memorise. Examples include the “2+2” rule and symbols indicating the mask requirement.

Further attention should be paid to communication behaviours of the following groups in order to avoid the risks of being exposed to misleading and/or false information. According to our research these groups include:

- **Homeless individuals and care clients living in their home.** During COVID-19, social workers had to deal with misperceptions amongst individuals living on the street, but also those living at their homes. Much time was spent on debunking and correcting misinformation (like misunderstandings and rumours). Individuals living in their home receive most information on social media where disinformation easily circulates.
- **Substance abusers.** BuildERS’ findings indicate this group was prone to believing false information and/or ignoring official information since they felt as if they had nothing to lose (‘I am going to die anyway’).
- **Migrant communities.** BuildERS’ findings indicate some groups were sceptical to vaccines, to testing, and to the reality of disease. For example, Polish and Roma communities who lived outside their home countries were sceptical to information and suspected hidden purposes behind it, partly because of past negative and traumatic experiences. NGOs felt a pressure from authorities, which led to difficulties for them to stay neutral in regards to the vaccine (Norwegian workshop).



Our research indicates that policy makers should fund more research on the communication behaviours of these groups to reduce the potential negative impacts of misleading and/or false information. Insights from such research should be incorporated into communication strategies.

4.8 Protective behaviours related to COVID-19

The seventh research question is: “What kind of COVID-19 protective behaviours have the respondents been involved in, and which factors influence this?”

4.8.1 Main quantitative results

In Table 15 we show results for variables measuring different types of COVID-19 protective behaviours. The questions were introduced with the following sentence: “Have you taken any of the following actions repeatedly during the pandemic period, in order to avoid getting the virus?”

Table 15. Mean scores and standard deviations for variables measuring different types of COVID-19 protective behaviours

	Home		Facility/ Centre		Street & temp.		<i>p</i>	Correlations		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		Afraid of infection	Trust in authorities’ info	Linking social capital
Avoided contact with people outside my residence	3.7	1.1	3.4	1.5	3.2	1.3	0.038	.346***	.200***	.210***
Washed myself more often	4.0	1.1	3.9	1.1	3.8	1.2	0.514	.262***	.171***	.248***
Cleaned my living place more often	3.7	1.2	3.5	1.2	3.4	1.3	0.454	.360***	.140**	.189***
I have taken other actions	3.1	1.2	3.4	1.4	3.1	1.1	0.440	.318***	.124**	n.s.

Note: Answer alternatives ranged from 1 (totally disagree) to 5 (totally agree) for all statements

Table 15 indicates significantly lower levels of self-imposed social isolation during COVID-19 among people living on the street and under temporary arrangements, while people living in their own homes report the highest level of social isolation. We do not see statistically significant differences between the groups on the other types of protective COVID-19 behaviours.

We also examine bivariate correlations between the different types of protective behaviours and worry about infection, trust in authorities’ information about COVID-19 and linking social capital. Results indicate that the strongest (positive) correlations are between respondents who worry about being infected with COVID-19 and protective behaviours. Trust in authorities’ information about COVID-19 and linking social capital are also positively correlated with COVID-19 protective behaviours, indicating that respondents with higher levels of linking capital (i.e. trust in authorities) and who trust government information about COVID-19 are more likely to be engaged in protective behaviours.



Table 16: Bivariate relationships between protective behaviours and different influencing variables

		Self-isolation	Washed myself
Background	Age	n.s.	n.s.
	Sex (Male=2)	-.120*	-.214***
	Immigrant, asylum seeker, without documentation (=2)	n.s.	n.s.
	Consider yourself a minority (=2)	n.s.	n.s.
Expos.	Have been infected themselves (Yes=2)	n.s.	n.s.
	Portugal/Spain/Czech (=2, others=1)	n.s.	n.s.
	Portugal (=2, others=1)	n.s.	n.s.
Living arrang.	Living on the street or temp. arrangement (=2, other=1)	-.142**	n.s.
	Living in facility or centre (=2, other=1)	n.s.	n.s.
	Living in own home (=2, other=1)	.145**	n.s.
Health	Health assessment	n.s.	n.s.
	Physical diseases (risk group)	n.s.	n.s.
	Psychological diseases	n.s.	n.s.

Table 16 indicates that the most important variables related to protective behaviours are sex, indicating more protective behaviours among female respondents, and living arrangements. Respondents living on the street and under temporary conditions are less involved in protective behaviours than the two other groups, while respondents living in their homes are more involved in protective behaviours.

4.8.2 Main qualitative results

Implementing protective behaviours among the clientele of care organisations was described as challenging in some cases. In the beginning of the pandemic, disbelief in the reality of the virus made some clients of soup kitchens reluctant to new ways of providing the services in ways that facilitate infection control (e.g. rules of social distancing and wearing masks, not being able to eat in the premises). Long-term housing facilities had to limit movement both outside (visits to friends and relatives) and inside the accommodation (common rooms). But in general, their clients were cooperative due to their trust that if staff that supports them daily sets new rules, then this is for the benefit of their clients. This also applied to the soup kitchens with long-term clientele and strong relations. Thus good relations with staff supported adoption of protective behaviours.

The staff of care organisations considered enforcement of protective behaviours to keep socially marginalised individuals safe from the virus as their role and task. They disseminated correct information about the regulations to their clients and provided personal protective equipment when possible. Sometimes, creative ways were used to embed new hygiene routines. For example, in long-term accommodation room, keys were handed over only to disinfected hands.

The Estonian and Belgian workshops emphasize the correlation between social workers and engaging in protective behaviours. In Belgium, it was mentioned that individuals who were in touch with social workers seemed more likely to “believe” in the pandemic and, as a result, were more likely to engage in efforts to protect themselves. In Estonia, the long-term relationships that care organisation staff had developed with their clients influenced their likelihood to engage in protective



behaviours as well as increase their willingness to follow regulations and restrictions. It was noted that clients of care organisations in Estonia wanted to avoid contracting the virus in order to avoid infecting others. In the Norwegian workshop, it was noted that several clients had misbeliefs about the virus and were sceptical to countermeasures, and that the social care workers used a lot of time and energy to provide correct information and counter misbeliefs.

4.8.3 Policy recommendations

Our results indicate significantly lower levels of self-imposed social isolation during COVID-19 among people living on the street and under temporary arrangements. (We may assume that this involves a higher level of risk of COVID-19 infection). We also see that this is related to lower risk awareness in this group, lower trust in authorities' information about COVID-19 and lower levels of linking social capital. These results indicate that people living on the street and under temporary arrangements might be able to engage in more protective behaviours if their trust in authorities' information about COVID-19 and their linking social capital is increased. We suggest the following measures to do this, building on recommendations in BuildERS deliverable 5.1 (Rhinard et al 2021):

- Long-term social capital building is difficult and must be societal wide. Policy-makers should allocate resources to anti-discrimination programmes. Resources should also be allocated to reducing inequality, improving spatial planning to avoid segregation, and organising community events (cf. Morsut et al 202: 46). All of this should be done in a way that recognises societal diversity.
- Authorities should consider discrimination and inequality in actions and programmes aimed at increasing social capital and building bridges across different groups in a community. Discrimination and inequality make access to (and generation of) social capital more difficult. Therefore, discrimination and inequality must be addressed in efforts to build social capital.
- Social capital is often the lowest for those not having their own home. Efforts to address homelessness and temporary housing problems must be prioritised. This can e.g. include subsidised housing and rent controls to keep housing affordable, as well as other tenant protection regulations. This can also include funding rehabilitation centres and/or half-way houses for homeless people struggling with mental illness and addiction. It can even include professional training programmes to help re-skill unemployed homeless people for the job market to ensure a more stable income and living situation etc.
- Local authorities must identify and reach out to intermediaries, in areas and communities where linking social capital are low and the need to build trust is high. (People living on the street have the lowest levels of linking capital and the least protective behaviour). These groups tend to trust intermediaries more than authorities.
- Implement measures to strengthen bonding (i.e., family and friends) and linking (i.e., trust in authorities) among people living on the street and in temporary conditions. Creating the basis for this could e.g. involve events, gatherings, activities etc. involving a broad spectrum of people from specific areas, including people from socially marginalized groups and other members of the community.
- Implement measures to strengthen social support to individuals living in the street or under temporary conditions during a crisis. The basis for this could be done through creating events or gatherings of the type described above, or other social arenas involving a broad representation of social groups.



5. Concluding discussion

5.1 Direct and indirect exposure to COVID-19

The first research question of the study was: “To what extent have the respondents been exposed to COVID-19 directly and indirectly, and to what extent have they been exposed to previous hazards before the pandemic?” A total of 22 of the 313 respondents (7 %) answered that they have been infected. The shares were highest in Portugal, Spain and the Czech Republic. Respondents in the two first countries also had the highest number of infected acquaintances. A total of 23 respondents (7%) reported that they had lost someone close to them due to the COVID-19 pandemic. Apart from the pandemic, the most prevalent previously experienced hazards in this sample were, extreme heat (44%), extreme cold (34%) and severe storm (33%).

5.2 Material outcomes of COVID-19

The second research question of the study was: “What are the material outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes? Our results show that 43% of the respondents agreed that the pandemic has had a negative effect on their income, access to shelter, food etc. Negative material impacts are also exemplified in the qualitative data. The first hypothesis was that the level of direct/indirect exposure to COVID-19 influences the level of negative material impact (Raifman et al., 2021; Aiyegbusi, et al., 2021). Our results are in accordance with this. We saw that negative material impacts were significantly correlated with living in Portugal, which is a country that was severely hit by the pandemic. This relationship does, however, not bring us more information about the mechanisms explaining the relationship, as country with high infection level is a very crude exposure measure. Raifman et al., (2021) and Aiyegbusi, et al. (2021) focus on inability to work due to infection. Our result could also indicate that restrictions on economic activity could be a mechanism. More research is needed.

Our second hypothesis was that compared to those living in their own home, individuals living in different types of facilities (e.g. homeless shelters, or longer term rehabilitation centres) can be expected to bear more negative material impacts. (Country Coordinator Denmark, 2021). Our results are contrary to this. The material impacts were most severe for people living in their homes, with 56% agreeing, compared to 40% in facilities/centres and 38% among respondents living on the street and in temporary arrangements. In our results, it seems that this is related to the type of income that the different groups rely on. It seems that (informal) paid work is more common among people living in their homes, while social benefits are a more prevalent type of income among people living in facilities/centres. The former was more negatively affected by the pandemic. The hypothesis was based on previous research indicating that dense living arrangements often coincide with precarious frontline work in marginalised individuals (or people living in dense facilities) (Country Coordinator Denmark, 2021). In our research it seems that source of income was a more important explanatory mechanism than physical living conditions.

Our third hypothesis was that respondents who report lower perceived health scores and/or more diagnosed chronic illnesses also report more material losses related to the COVID-19 pandemic (loss of income/shelter/food etc.) (Sapkota, Houkes, & Bosma, 2021; Hacker, Briss, Richardson, & et. al., 2021) Our results are not in accordance with this, presumably as the respondents with the most severe physical illnesses by and large were clients in facilities/centres. These clients were generally older and with more physical health problems.



5.3 Mental outcomes of COVID-19

The third research question of the study was: “What are the mental health outcomes of COVID-19 for (different types of) socially marginalised groups, and which factors influence these outcomes? To our knowledge, there are no other studies that have examined this issue. Our results indicate that 42% of the respondents agreed that the pandemic has had a negative effect on their mental wellbeing, or mental health. For COVID-19 specific worry, 37% of the respondents agreed that they have been afraid of being infected with COVID-19 since March 2020. The third measure of psychological impact that we use was a PTSD-scale based on three items (adapted from Bliese et al., 2008). A share of 54 % of the respondents scored six or higher on the PTSD index, which means that they quite often experience PTSD-like symptoms related to COVID-19.

The fourth hypothesis was that exposure to previous disasters influences the level of negative psychological consequences, e.g. PTSD related to COVID-19 (Neria et al 2008). We found that people who have been exposed to disasters previously are more likely to suffer from symptoms of PTSD because of the pandemic. This also applies when we control for country (i.e. Portugal, Spain Czech Republic). The relationship between PTSD related to the COVID-19 pandemic and previous disasters is in line with previous research (Breslau et al 1999), which indicates that history of any previous exposure to traumatic events was associated with a greater risk of PTSD when exposed to a new disaster.

We assumed (Hypothesis 5), based on previous research, that the psychological impacts would be least negative for socially marginalised people living in their own homes and worst for people living on the street, as the former have better opportunities to protect themselves from infection (cf. Busch-Geertsema et al., 2016), and as they are less marginalised than homeless people, for whom vulnerability characteristics tend to accumulate (Morris 2020; Tsai & Wilson 2020). Our results do, however, not support Hypothesis 5. Socially marginalised people living in their own homes reported significantly more negative impacts of the pandemic on their mental health and mental wellbeing than the other groups. People living on the street and under temporary conditions reported lower impacts than the other groups. This also applies controlled for several key variables in the multivariate analyses in Nævestad et al (submitted).

Hypothesis 6 was that the psychological consequences of COVID-19 are more negative for people for people with psychological diagnoses and physiological diagnoses (i.e. people in the risk groups). In accordance with the first part of Hypothesis 6, results indicate that respondents' psychological diseases (personality disorder, depression, schizophrenia) were significantly correlated with negative COVID-19 influence on mental health and mental wellbeing. Results from the qualitative interviews also indicate that people with psychological diagnoses were severely impacted, e.g. with high levels of fear and anxiety. These results are in accordance with previous research. Psychological impacts of disasters are more negative for people with psychological diagnoses (Lee 2020), and previous research indicates high levels of mental disorders among socially marginalised groups in general compared to the general population (Schreiter et al 2017).

Based on previous studies (e.g. Disu et al 2020; Tsai and Wilson 2020; Wang et al 2020), we also hypothesized that people with poor physical health, operationalized as heart and lung diseases, may be in risk groups, and/or that they would feel more vulnerable to disease because of their poor health. In contrast to this (2. part of Hypothesis 6), we did, however, not find relationships between physiological diseases (e.g. heart and lung diagnoses) and negative psychological impacts. This is surprising, given the results of previous studies.



The seventh hypothesis was that people who are not national citizens, e.g. asylum seekers, immigrants, people with undocumented status in the country, are likely to be more vulnerable in disasters, as they have fewer rights, and as they are likely to be underprivileged in several respects (e.g. with regard to legal rights, housing, economy, experiences with previous hazards) (Guadagno et al., 2017; Weerasinghe & Taylor, 2015). In accordance with this, we found that being an immigrant/asylum seeker/without documentation was significantly related to PTSD symptoms.

In accordance with the results summed up in the meta study of Wang et al. (2020), our results also indicate that outcomes on mental wellbeing/health and PTSD symptoms were worse for female than male respondents.

Previous studies report that negative economic impacts are related to negative psychological impacts (Kawohl and Nordt 2020; Jain 2020 and Gostin; Wiley 2020). Our results are generally in accordance with this: negative COVID-19 impacts on economy, shelter etc. was related to negative COVID-19 impact on mental wellbeing/health and PTSD symptoms. We study socially marginalised groups, and we may assume that they have few economic resources, which make them particularly vulnerable to negative economic impacts induced by the pandemic. This is also in line with the results from the qualitative interviews, which indicate serious economic and psychological consequences for clients living in their homes. Many of these clients, who were border-line coping before the crisis, fell below the economic subsistence level, e.g. as they lost their jobs. This often led to economical and psychological destabilization of their lives. This sudden deprivation because of the crisis might explain our results. Additionally, mental challenges related to loneliness and uncertainty about the future (e.g. related to own health, economy and the state of the society) were also reported. This is another important explanation of psychological impacts of COVID-19 that should be examined in future research.

The eight hypothesis was that individual resilience is be a crucial protective factor against disaster impact and against post-traumatic stress disorder (PTSD), depression, or other mental health problems (Agaibi & Wilson, 2005; Brewin et al., 2000).. Our results support this hypothesis. We have found that individual resilience is significantly related to less negative mental impacts of COVID-19 among the respondents.

5.4 A model for the coping of care organisations

The fourth research question of the study was: “How have the social care organisations coped with the challenges of the COVID-19 pandemic, to what extent and how have they been able to help their clients during the pandemic?”

Across countries, the different types of services experienced similar changes: immediate cancellation of socialisation activities and obligations to close down some facilities. While night shelters and soup kitchens had to broadly reorganise their work to minimise contacts, the residential facilities were minimally affected. The most drastic changes were undergone by day centres that had to suspend services like hygiene facilities, and warm room to the clients.

Based on the Pentagon model of Schiefloe (2011), some of the main factors impeding resilience were related to the formal aspects of the organisations, i.e. the organisational structure i.e. lacking personnel, rosters that were unsuitable to a pandemic, high workload and stress in shelters that now turned into long-term residential shelters and the infrastructure (inappropriate physical facilities) particularly in day centres, in shelters but also in soup kitchens. Additional factors were negative external framework conditions. The public health situation, economic and crisis management



context, in many country cases, involved insufficient or delayed support from the government and municipalities.

Based on the Pentagon model, we may conclude that some of the main factors facilitating resilience were related to leadership and culture, particularly in the day centres and short-term shelters that had to reorganise their services to a large extent. Leadership was central, as leaders, at different levels were cooperating in and across the organisation and were also crucial in coming up with new solutions. Results also indicate that the mission to help is an important part of their organisational culture that guided their actions and commitment in dealing with the crisis.

We sum up the main factors facilitating and impeding resilience in Figure 9.

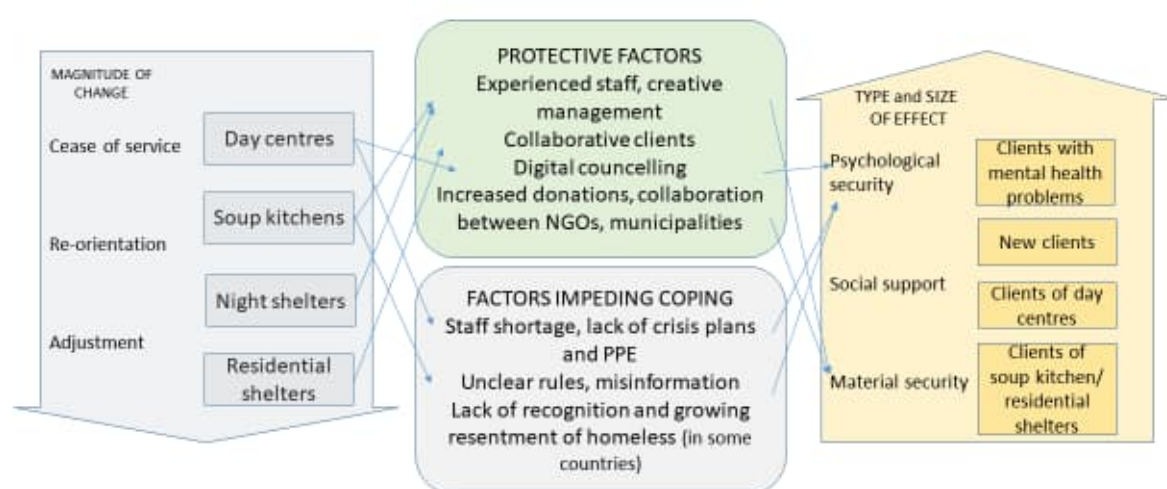


Figure 9. The change introduced in organisations, protective factors and factors impeding coping and the size and types of effects on clients. (Source: Orru et al 2021c)

Figure 9 illustrates that the pandemic and the subsequent responses from the studied aid organisations involved different types of outcomes for different types of clients relying on different types of services. Overall, some of the greatest effects of the pandemic were experienced by the individuals that had to turn to care services for the first time. These individuals had been struggling to cope economically or due to mental health prior the pandemic, and in the overwhelming health, social and economic crisis, experienced the loss of hope for entering job market or for other ways of improving their situation.

As for the existing clients, residential rehabilitation or night shelters that reorganised to full provision felt safest and taken care of. In contrast, frustration appeared among the homeless because they lived the paradox of not being allowed to be on the street and having nowhere to stay, as they were often fined and removed by the police in Czech Republic and Hungary. Despite efforts to communicate with clients using phones and internet, social isolation and loneliness were described, more severely hitting those with mental disorders. Fourth, the psychologically fragile clients struggled the most due to increased fears and paranoias. Thus, although the aid organisations were able to maintain operations, they were less successful in providing help to some groups.



5.5 The role of social capital

The fifth research question of the study was: “What is the level of social capital in the studied groups, and what is the role of this social capital for them during COVID-19?”

Among the three groups of social care organisation clients included in the current study, we hypothesized that the more socially disadvantaged people are, the lower is their level of (bonding, bridging and linking) social capital, and thus that people experiencing homelessness have lower levels of social capital than marginalised people living in their homes (cf. Uphoff et al 2013; Morris 2020; Wilson & Tsai 2020) (Hypothesis 9). Our results largely support this hypothesis:

We also hypothesized that high levels of bonding (and bridging) social capital will enable people to cope better before, during and after disasters, as this can provide them social support (Borgonovi and Andrieu 2020). (Hypothesis 10). Our results are in accordance with this, as we found that a high level of bonding capital was positively and significantly related to receiving help from other (private) people (e.g. relative, neighbour, friend) to deal with the impact of pandemic.

Additionally, we hypothesized that high levels of linking social capital will enable people to cope better before, during and after disasters, as high levels of trust in authorities will give them better access to correct information, better motivation for correct protective behaviours and better access to help from authorities (Yamaguchi et al 2017; Borgonovi and Andrieu 2020) (Hypothesis 11). Our results support this hypothesis. Our results indicate a relationship between linking capital, trust in authorities COVID-19 information and self-inflicted social isolation during COVID-19 (cf. Nævestad et al under review). Our multivariate analyses indicated that the most important variable contributing to respondents’ social isolation was the variable “I trust the information that the government of this country provides on the ways of avoiding COVID-19 infection” (Nævestad et al under review). Additionally, we found that the second most important variable influencing social isolation was linking social capital. These results are also in line with the results of Bargain et al. (2020) and Durante et al. (2020), who find relationships between the trust level in society and self-isolation. This is not surprising, as this variable measures respondents’ trust in the police and social workers.

According to Wu (2020), the existing studies of COVID-19 have largely overlooked that different aspects of social capital play different roles when it comes to peoples’ experiences with the COVID-19 pandemic as they largely fail to be explicit about how they are conceptualizing social capital, and thus obscuring the differential roles that different forms of social capital may play related to COVID-19. The main strength of the present study is that we measure and examine the importance of different types of social capital for the protective COVID-19 behaviours.

5.6 Factors influencing respondents’ risk awareness

The sixth research question of the study was: “Which factors influence respondents’ risk awareness related to COVID-19?”

We hypothesized that socially marginalised people in general and people experiencing homelessness in specific are likely to have lower risk awareness related to e.g. the pandemic compared with the general population. (Hypothesis 12). In accordance with Hypothesis 12, our results indicate lower levels of risk awareness among people living on the street or under temporary arrangements. These people have thought less about preventive actions, are less likely to believe that the virus causes them notable harm and agree more that their life conditions prevent them from actions to prevent COVID-19. Additionally, people living on the street or under temporary arrangements were less afraid of being infected with COVID-19,



We also hypothesized that socially marginalised people in general and people experiencing homelessness in specific are likely to have lower trust in authorities' information about e.g. COVID-19 than the general population. (Hypothesis 13). Our results also support this hypothesis, as we found that people living on the street and under temporary conditions had lower trust in government information about COVID-19.

5.7 COVID-19 protective behaviours

The seventh research question of the study was: "What kind of COVID-19 protective behaviours have the respondents been involved in, and which factors influence this?"

Based on previous research (Abdelrahman et al. 2020; Pedersen and Favero 2020), we hypothesized that protective COVID-19 behaviours will be influenced by risk awareness, linking social capital and trust in authorities' recommendations. (Hypothesis 14). Our results are in accordance with this. As discussed above, all these variables are significantly correlated with self-inflicted self-isolation. We also measured other types of protective behaviours, e.g. related to sanitation of hands and residence, but we did not find significant differences among the studied groups of social service clients on these variables. We therefore focus on social isolation in the following.

Comparing the three groups of clients of social care organisations, we assumed that people living on the street will engage in less COVID-19 protective behaviours in general and self-inflicted social isolation in specific, as we assumed that they have lower levels of social capital than the two other groups, lower risk awareness and lower trust in authorities' recommendations to self-isolate during the pandemic. (Hypothesis 15). Our results also support this hypothesis. We see significantly lower self-isolation among people living on the street and under temporary conditions.

When comparing self-inflicted social isolation as we do in the present study, it is important to remember that we compare groups that we may expect to have different possibilities to isolate themselves from other people. We would for instance expect people living in their homes to have better possibilities to avoid contact with people outside their residence, than people living on the street and temporary. In the multivariate analyses in Nævestad et al (under review), we saw however that the variable "My life conditions do not allow me to do such things" was not significantly related to self-inflicted social isolation. Instead, trust in authorities' COVID-19 information was the most important variable influencing self-inflicted social isolation in these analyses. This is probably due to the (unmeasured) fact that government information about how to avoid COVID-19, includes recommendations to avoid contact with people outside your current residence (i.e. self-isolate).

The sixteenth hypothesis was that protective COVID-19 behaviours will be influenced by demographic variables, and it will be higher among women and older respondents. Our results do generally not support this hypothesis, although we found lower protective behaviours among males, and the difference was significant at the 10%-level ($p=0.053$).

We also hypothesized that protective COVID-19 behaviours will be influenced by information sources. (Hypothesis 17). The most prevalent source of information about COVID-19 among our respondents was television, followed by social media, newspapers and social workers. In our bivariate analyses, we found that television as information source on the pandemic was related to more social isolation, worry of infection and trust in government information on COVID-19. Social media, on the other hand, was related to less worry of infection. The variation in these results indicate that the importance of the different information sources on correct health protection



behaviours may vary according to the national context. This is an important issue for future research.

5.8 The situational character of vulnerability

The eight research question is: “What kind of understanding of vulnerability and resilience in disasters do the qualitative and quantitative data provide us with?”

The counterintuitive result that socially marginalised people living in their homes experienced more negative impacts on their mental wellbeing/health than e.g. people living on the street is interesting, and it indicates that the COVID-19 pandemic also is a psychological disaster; involving high levels of worry and loneliness (because of self-isolation) during lockdowns. In many cases, this psychological impact of the disaster is probably the most important impact. In this study, we focus on respondents' level of physical protection provided by living arrangements (Busch-Geertsema et al., 2016), separating between socially marginalised people living in their homes, in facilities and on the street. Our results indicate, however, that homes may provide less protection against psychological types of hazards induced by the COVID-19 pandemic, than other more physical hazards (e.g. extreme cold, extreme heat, storm). In fact, it can seem that homes may increase the impacts of psychological hazards, as they might be a source of loneliness during lockdown (e.g. when comparing with people living in facilities). Relationships are, however, complex, and should be further examined. Additionally, our qualitative and quantitative results indicate that having a job also may be a source of vulnerability, when the job is lost, especially for marginalised people with few resources, as loss of the job may bring about serious material and psychological consequences. The qualitative data indicates that this especially applies if the people become clients for the first time. These are important issues for future research. Thus, when studying psychological impacts of COVID-19 for marginalised groups, it is important to remember that vulnerability and resilience to some extent is situational, in the sense that characteristics that might be related to resilience in some disasters may be related to vulnerability in other disasters (cf. Morsut and Kuran et al 2020).

5.8 Main policy recommendations

Based on the results of the empirical analyses of factors influencing vulnerability in disasters, we suggest the following general policy recommendations:

- Increase the social capital of people living on the street or under temporary arrangements, as this is related to getting help from friends and relatives (bonding capital) and preventive behaviours (linking capital). (For more specific actions or policies, see Sections 4.6.3 and 4.8.3).
- Increase the risk awareness of people living on the street and in temporary shelters, as this is related to preventive behaviours. (For more specific actions or policies, see Sections 4.7.3 and 4.8.3).
- Increase trust between people living on the street or under temporary arrangements and authorities at different levels, as this is related to (access to information and) preventive behaviours. (For more specific actions or policies, see Sections 4.6.3 and 4.8.3).
- When looking at factors influencing people's vulnerability to negative mental and material impacts in crises, focus on women, people living in areas highly exposed to the disaster, people who experience negative influences on income during the disaster, minorities, people who are asylum-seekers, immigrants, people residing in the country without documentation,



people who have experienced disasters previously, and people with psychological diagnoses. (For more specific actions or policies, see Sections 4.3.3., 4.4.3 and 4.5.2).

- Although socially marginalised people living in their homes may seem less marginalised than people living on the street, it is important to remember they may be more vulnerable to negative mental impacts of crises like COVID-19, when developing policies. (For more specific actions or policies, see Sections 4.4.3, 4.6.3, and 4.7.3).
- This indicates the importance of a situational approach to vulnerability, resilience and disaster management.
- Crises like the pandemic hit the individuals that are already vulnerable and marginalised the hardest, pushing them to receive help from care organisations. Therefore, crisis funds, extra shelter space and other material (e.g. PE) and psychological (counselling, recognition) support need to be extended also to care organisations to be able to meet the surge in demand for safe services. (For more specific actions or policies, see Section 4.5.2).
- The representatives of care organisations need to be involved in official crisis management planning and in tailoring response measures for the interventions to reflect the needs of their clientele and other marginalised populations. (For more specific actions or policies, see Sections 4.5.2 and 4.7.3).
- The staff of care organisations need to be recognised as the mediators/interpreters of official risk and crisis information to their clientele including the marginalised individuals. Their communication and guidance are an essential source of alignment with safety measures. (For more specific actions or policies, see Section 4.7.3) .

We will elaborate more in detail on the last point in the following.

Based on the theoretical analysis of vulnerability and resilience in disasters, we suggest the following general approach to vulnerability when developing policy:

Our results therefore indicate that **there is a need to approach vulnerability from a more nuanced, intersectional perspective** (cf. Morsut et al 2020; Orru et al 2021a; Rhinard et al 2021). This has several components.

First, authorities must appreciate that vulnerability is determined by the interactions of a complex set of dynamic individual characteristics and their interlinkages with societal structures. Such characteristics include, but are not limited to: age, gender, economic status, citizenship status, belonging to a minority, or health condition. By including additional characteristics and intersecting them in the assessment, it becomes possible to find combinations of factors that might alleviate or worsen vulnerability (e.g., you can be homeless but have excellent health, making you less vulnerable than a homeless person with poor health). By looking at the interactions of a complex set of individual characteristics, as well as the accessibility of informal and formal support (such as care organisations), vulnerability assessments may become more precise (Orru et al, 2021a). This, in turn, allows for the development of more nuanced measures to support vulnerable people (Orru et al, 2021a). As advocated by Rhinard et al (2021), this ensures that resources are allocated to those that need them the most. Furthermore, it avoids victimising and stigmatising broad and heterogeneous groups and helps to move away from the current tendency for unjustified stereotyping (possible stigmatisation) stemming from the vulnerable groups-based thinking.



Second, to make vulnerability assessments more precise and to create a better understanding of vulnerability factors intersecting and burdening certain individuals, we recommend using a **situation-centred** vulnerability assessment method. BuildERS has developed a **scenario-based tool**³, which is designed to support crisis managers to assess which factors contribute to vulnerability and how they intersect to specify the circle of affected individuals in relation to specific hazardous scenarios or in a crisis at hand (Orru et al 2021a,b,c). Moreover, we recommend that those responsible for vulnerability assessments engage a diverse group of actors, including representatives of those most vulnerable (such as care organisations and other intermediaries) in the process of mapping and analysing vulnerabilities.

Third, when conducting vulnerability assessments, we recommend understanding vulnerability as dynamic (i.e., changing over time) rather than as a stable condition of specific social groups. Anyone could be vulnerable at a given point in time, in a given context. The vulnerability assessments need to be revisited and revised before, during, and after crises, particularly in such long-term disasters as the pandemic.

5.9 Methodological weaknesses, strengths and questions for future research

5.9.1 Strengths and weaknesses of the quantitative data

A methodological weakness of the quantitative data is the relatively small sample of respondents. The study includes 313 respondents, but the number is low in several of the countries. Thus, we recommend that future studies examining further the themes that we discuss here, include larger samples of socially marginalised people. Additionally, future studies should also include people that are not marginalised to establish robust conclusions, e.g. about the more or less severe impacts among socially marginalised groups. Data collection during the pandemic has, however, been challenging, especially when dealing with marginalised people facing difficulties because of the pandemic. Data collection was also postponed, in line with all other activities in the society, when infection levels peaked. Another potential challenge related to the small sample is the issue of representativity. With the low number of respondents, it is reasonable to ask whether they actually are representative for their different groups. Unfortunately, it is impossible to calculate response rates, due to the method of survey distribution.

Moreover, although it may be difficult to conclude about the importance of the national context due to the low numbers in several countries, one of the main purposes of including the national variable is to control for the level of infection (and thus restrictions, impacts etc.) in the studied countries. Our current design allows for this, as we combine the three countries with the highest infection levels into one “countries with high infection level” variable, which includes two values: 1) All the other (10) countries in the sample and 2) Portugal, Spain and Czech Republic.

Another methodological weakness of the study is that the categories of socially marginalised people are unevenly distributed between the national samples. The combination of the limited sample size and the uneven groups limits implies that we cannot exclude the possibility that some of the

³ In Orru et al (2021a), a vulnerability assessment tool was designed and tested it in Estonia with three crises scenarios: disruption of electricity supply, COVID-19 pandemic, and a cyber-attack against governmental information systems.



observed effects are in part explained by national differences. However, while previous studies of socially marginalised groups tend to focus only on people living on the street (Schreiter et al. 2017), the present study focuses on a broader spectrum of socially marginalised people; ranging from people living in their homes to people living on the street. of vulnerability. This is the unique contribution of the study. Our study also includes minorities, migrants, asylum seekers, undocumented immigrants, homeless women, people living on the streets. There are few studies exploring this spectrum of vulnerability. Gayer-Anderson et al (2020) assert that there is little research that has considered the psychological impacts of COVID-19 and other public health crises on socially marginalised populations.

5.9.2 Strengths and weaknesses of the qualitative data

The main analytical focus in the study of the social care organisations was not to compare countries, although national differences were mentioned when relevant. Neither was the main focus to compare individual organisations within the countries. The main analytical focus was rather to compare different types of care organisations across countries. The rationale for this focus was that the number of studied care organisations (29) was too high to allow for detailed comparisons of them. Second, our analyses indicate that the data material mainly include four different types of care organisations, and that these to different degrees have been impacted by the pandemic. Additionally, our analyses indicate that the challenges of these four types of organisations have been quite comparable across countries, suggesting that the care organisation type should be the main analytical focus of the paper. Future studies could also conduct more detailed comparisons of national contexts, using more data from each country.

This explorative study on the care organisations' responses to pandemic necessarily used a qualitative approach to map out the variety of determinants of responses by care organisations. However, due to the relatively small sample of interviewees per country, the findings should be seen as a starting point for more detailed investigations to define the impacts of COVID-19 and safety measures in different groups of service users, in various types of care services and in different country contexts. For a more detailed understanding of the relevance of these factors, a more structured survey engaging more organisations could be a welcome development. Current research focused on the experiences of homeless and individuals in precarious situations that have reached out to care organisations and are, as one of the interviewees put it, "saved" to at least some extent. However, the resilience of those individuals in vulnerable situations that do not receive the support of any governmental or non-governmental organisations needs further investigation. Further research should take a more in-depth look on the perspectives of clients of aid organisations.

5.10 The validation of the results in the following work of BuildERS

The preliminary results of the survey and interviews with care organisations were presented, discussed and validated in workshops with representatives of care organisations carried out under WP6 in Estonia (2 workshops), Norway, Hungary and Belgium from June to September 2021. The current report reflects the results of these validations of the preliminary findings. However, in WP6 further discussions on the results and policy recommendations are planned in a digital Colloquium in January 2022. The Colloquium will be held in Estonia, Germany, Finland and Norway and will focus on the care organisations' experiences in exchange with the authorities tasked with disaster management. Next to academic experts, the participants will involve representatives of care organisations and local and national social services. The participants will be presented key results



of WP3 and the BuildERS vulnerability assessment tool and discussion follows. More specifically the colloquium discussion will look into:

- Current practices and experiences of representing the needs of marginalised individuals in disaster management by social care organisations and social services during the preparedness, response and recovery.
- Ways of improving the involvement of the marginalised in disaster management planning, including e.g. vulnerability assessments.
- The discussion will revolve around the experiences of COVID-19 and other crises.

During the preparation of this report, in October 2021, in collaboration with WP5, the evaluation of the policy-recommendations was carried out. Over 50 policy makers from EU, national and local authorities and organisations across more than 14 EU countries and beyond were engaged as evaluators of the preliminary recommendations proposed based on the results of WP3. The results of these evaluations are reported in deliverable 5.2 in the BuildERS project.

6. Conclusion

We have found relatively high levels of negative psychological impacts of the COVID-19 pandemic among the groups of socially marginalised people that we study. In contrast to our assumption, we found that marginalised people living in their homes experienced more negative impacts on their mental wellbeing/health than e.g. people living on the street. This indicates that the COVID-19 pandemic also is a psychological disaster; involving high levels of worry and loneliness because of lockdowns. This is also a very important impact of the pandemic. Homes may provide less protection against psychological types of hazards induced by the COVID-19 pandemic, than other more physical hazards. The main policy recommendation that this result gives rise to is that although socially marginalised people living in their homes may seem less marginalised than people living on the street, they may be more vulnerable to negative mental impacts of crises like COVID-19. This indicates the importance of a situational and intersectional approach to vulnerability, resilience and disaster management.

Negative COVID-19 influence on income, shelter etc. was also related to all our measures of negative mental impacts. Other factors influencing negative impacts were sex (i.e. women), people living in areas highly exposed to the disaster, people who experience negative influences on income etc. during the disaster, minorities, people who are asylum, seekers, immigrants, or residing in the country without documentation, people who have experienced disasters previously, people with psychological diagnoses

Comparing the level of (bonding, bridging and linking) social capital among the three studied marginalised groups, we find the highest levels among people living in their homes and the lowest levels among people living on the street and under temporary conditions. Respondents with high levels of bonding capital received more help from friends, family etc. during the pandemic, while respondents with high levels of linking capital were more likely to engage in protective COVID-19 behaviours like self-inflicted social isolation during COVID-19. Our results indicate lower levels of risk awareness among people living on the street or under temporary arrangements and lower trust in government information about COVID-19. These individuals have thought less about preventive actions, are less likely to believe that the virus causes them notable harm and agree more that their life conditions prevent them from actions to prevent COVID-19. Additionally, people living on the street or under temporary arrangements were less afraid of being infected with COVID-19. In



accordance with these results, our data indicate that people living on the street or temporary were less engaged in protective COVID-19 behaviours, as e.g. self-inflicted self-isolation during COVID-19.

The general policy recommendation based on this result is to increase the social capital of people living on the street or under temporary arrangements, as this is related to getting help from friends and relatives (bonding capital) and preventive behaviours (linking capital). Additionally, we recommend measures to increase the risk awareness of people living on the street and temporary, as this is related to preventive behaviours, as well as their trust in government information.

We have also qualitatively examined the situation of the social care organisations which provide help to the socially marginalised people in our study. Instead of closing down as a response to the COVID-19 threat and restrictions, the aid organisations employed their long-term experiences and trust networks with the clients, shifted their structure and mode of operating to pursue the caring mission. Across countries, relatively similar changes were undergone in the four key types of aid organisations: While day centres needed to suspend their support or digitalise key counselling activities, night shelters and soup kitchens broadly reorganised their work to minimise contacts, and residential facilities were minimally affected. However, the increasing demand for services, overburdening of the staff with new tasks (e.g. digitalisation) and infection threat was rarely met with appropriate support from health and care authorities. The analysis demonstrates that existing structural inequalities, e.g. limited access to official (health) emergency services, aggravate the situation of those who are already vulnerable (migrants, poor communication skills) during the crisis unless they find support networks from e.g. aid organisations. In spite of the relatively resilient response of the aid organisations, outcomes were worse for some types of vulnerable groups than others. Next to psychologically fragile clients and migrants, new clients – individuals pushed into the vulnerable situation for the first time- were the critically challenged.



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Annex 1: Papers presenting results from WP3

The results from the WP3 survey and interviews are also presented in several papers, which are published, in review or soon to be submitted. Several of the chapters in the present deliverable are based on these papers, which are referred to in the chapters. The papers go deeper into specific themes, and include multivariate analyses. These papers are:

Orru, K. et al (2021) *Resilience in care organisations: challenges in maintaining support for vulnerable people in Europe during COVID-19 pandemic*, published in Disasters

Nero K. et al (under preparation) *Mechanisms behind COVID-19 scepticism among marginalised groups in Europe*, to be submitted to Risk Research

Orru, K. et al (under preparation) *Material impacts of the pandemic on the marginalised: COVID-19 as the final push to health-poverty trap?*, to be submitted in January 2022

Olson, A. et al (under preparation) *The Impact of COVID-19 on Migrant and Refugee Populations in Europe: Insights from 13 Countries*, to be submitted in January 2022

Nævestad, T.-O. et al (under review) *Self-inflicted social isolation among clients of social care organisations in the COVID-19 Pandemic*, under review in the International Journal of Disaster Risk Reduction

Nævestad, T.-O. et al (submitted) *Psychological impacts for socially marginalised groups in the COVID-19 Pandemic: A Study from European countries*, under review in the European Journal of Social work



Annex 2: Summary of the general policy recommendations

- Facilitate interaction with peers, community, and authorities of people living on the street or under temporary arrangements, as their social capital is related to getting help from friends and relatives (bonding capital) and preventive behaviours (linking capital).
- Tailor risk and crisis information materials and support info channels (e.g. well-informed care staff) suitable for people living on the street and in temporary shelters, as their risk awareness is related to preventive behaviours.
- Demonstrate authorities' consideration and care for people living on the street or under temporary arrangements in action. Feeling protected by authorities at different levels and trusting them is related to access to information, as well as preventive behaviours.
- Improve relationships between socially marginalised people and other people in their community, to increase acceptance and trust, as these relationships are important in crises, e.g. for marginalised people to receive help and information.
- In order to mitigate negative mental and material impacts of crises like the pandemic, focus on: women; people living in areas highly exposed to the disaster; people who experience negative influences on income during the disaster; minorities, people who are asylum seekers, immigrants, or residing in the country without documentation; people who have experienced disasters previously; and people with psychological diagnoses, as these are key factors influencing vulnerability among marginalised individuals.
- Although socially marginalised people living in their homes may seem less marginalised than people living on the street, they may be more vulnerable to the negative mental impacts of crises like COVID-19. Countermeasures to mitigate the negative effects of isolation need to be established.
- This indicates the importance of a situational and intersectional approach to vulnerability, resilience and disaster management.
- Crises like the pandemic hit the individuals that are already vulnerable and marginalised the hardest, pushing them to receive help from care organisations. Therefore, crisis funds, extra shelter space and other material (e.g. protective equipment) and psychological (e.g., counselling and recognition) support need to also be extended to care organisations to be able to meet the surge in demand for safe services.
- The representatives of care organisations need to be involved in official crisis management planning and in tailoring response measures for the interventions to reflect the needs of their clientele and other marginalised populations.
- The staff of care organisations need to be recognised as the mediators/interpreters of official risk and crisis information to their clientele- including the marginalised individuals. Their communication and guidance are essential sources of motivation for alignment with safety measures.



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