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# COVID-19 in our lives: Sense of community, sense of community responsibility, and reflexivity in present concerns and perception of the future

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(Article begins on next page)

# COVID-19 in our lives: Sense of community, sense of community responsibility, and reflexivity in present concerns and perception of the future

#### **Abstract**

With this study we examined 1) the associations between citizens' perceptions of the effectiveness of institutional response to contrast COVID-19, Sense of Community (SoC), Sense of Community Responsibility (SoC-R), personal and social current concerns and perceptions of the post-pandemic future; and 2) the mediating role of personal reflexivity about COVID-19 pandemic in the relationship between SoC, SoC-R, and people's personal and social current concerns and perceptions of the future. An online self-report questionnaire was administered to 3,925 Italian adults during the first COVID-19 lockdown (spring 2020). A structural equation model was tested. Institutional effectiveness was associated with SoC, SoC-R, social concerns, and perceptions of the post-pandemic future. SoC and SoC-R were associated with current personal and social concerns, as well as with perception of post-pandemic future. Reflexivity correlated negatively with SoC and positively with SoC-R, mediating the relationships between SoC, SoC-R and personal and social concerns and perceptions of the post-pandemic future.

**Keywords**: COVID-19, sense of community, sense of community responsibility, reflexivity, personal and social concerns

#### Introduction

Like other countries around the world, Italy declared a state of emergency in March 2020 and imposed a nationwide lockdown from March 9 to May 4 to contain the spread of the SARSCoV-2 virus. This public health measure was without historical precedent and had a profound effect on everyday life: avoidance of physical contact outside the home, curfews, closure of all commercial activity, except for food supply stores, banks, and pharmacies. The measure was justified by the public authorities as the most effective means to curb the spread of infection, the cause of an unprecedented number of deaths and a huge strain on the public health system. But if prolonged and restrictive, lockdown can also have negative consequences for society (e.g., disruption of the economy) and individuals (e.g., psychological distress, health anxiety, present worries, and perceptions about the future) (Varga et al., 2020).

During the nationwide lockdown, the public authorities and the mass media appealed to the population's sense of community to cope with the emergency and celebrated the ways in which people expressed their solidarity and pride in belonging to the community (e.g., singing from their balconies, <a href="https://time.com/5802700/lockdown-song/">https://time.com/5802700/lockdown-song/</a>). There were also frequent appeals to a sense of responsibility toward the community to respond to and recover from the pandemic crisis. It was clear that living through the pandemic would entail making adjustments in one's personal and social daily routine but might also lead to unpredictable change. Recent research has shown that the experience of the local community of belonging – in terms of tie and responsibility towards it, as well as of local relationships and supportiveness – can drive reorientation processes in the face of the changes brought about by the COVID-19-related emergency and foster positive outcomes despite the stressful and disruptive circumstances (Gatti & Procentese, 2021).

At the same time, factors affecting confidence in institutional decisions and satisfaction with the public health measures were also considered as regards to the citizens' responses towards the pandemic (Reicher & Stott, 2020). However, while the extant literature has mainly focused on trust and legitimacy towards authorities (Blader & Tyler, 2009; Tyler, 2012), relatively less attention has been devoted to the analysis of how the perception of the effectiveness of the institutional measures is related to negative (perceived personal and social concerns) and positive (perceived personal enrichment) responses engendered by the experience of the pandemic.

With the present study, we wanted to understand how citizens' perceptions of the effectiveness of institutional response to the pandemic, the tie and the responsibility felt towards their community of belonging during the lockdown, were associated with their

personal and social concerns and their perceptions of a post-pandemic future – meant either as potential enrichment stemming from their lockdown experience and/or as a return to pre-COVID-19 daily and working life. Our hypothesis also posited that personal reflexivity mediates the relationship between the ties people feel with their community (in cognitive and affective terms) and people's personal and social concerns, as well as perceptions of a post-pandemic future.

# Sense of community, effectiveness of institutional response, and sense of community responsibility

Sense of community (SoC) refers to "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9). McMillan (1996) posited that SoC builds on the decision-making capacity of a community and on its structure of authority: "A community must have a way to process information and make decisions. Without this capacity, the community will eventually perish. The decision makers must have authority over the members for the sense of order to be maintained in the community" (McMillan, 1996 p. 319). SoC has been identified as a protective factor during emergencies that reduces psychological distress (Jetten et al., 2012). There is evidence for this buffering effect also in the COVID-19 pandemic (Marinaci et al., 2020; Sibley et al., 2020). The COVID-19 pandemic provides a particularly interesting context to investigate the protective role of SoC because of its own nature, which requires collective responses to control it.

In this setting, sense of community responsibility (SoC-R), a recently defined complementary conceptualization of SoC, can be useful. SoC-R refers to a feeling of personal responsibility for individual and collective well-being without the expectation of personal gain (Boyd et al., 2018; Nowell & Boyd, 2010). As Boyd and Martin (2020) noted, a sense of community responsibility emerges when people mature personal values and beliefs about responsibility when they are engaged in such various institutions as family, neighborhoods, school, and social groups. In brief, "individuals will experience a greater sense of community responsibility when cognitive dissonance is reduced between signals in the community about responsibility and individual perceptions of how responsible one should be" (Boyd & Martin, 2020, p. 2). Recent studies supporting the empirical distinction between these constructs show that SoC and SoC-R are different albeit related dimensions (e.g., Boyd & Nowell, 2017; Prati

et al., 2020). Previous theoretical and empirical studies demonstrated that both SoC and SoC-R predict community engagement (e.g., Boyd & Nowell, 2017; Talò, 2018), civic and political participation (e.g., Prati et al., 2020; Procentese & Gatti, 2019; Talò et al., 2014), prosocial behaviour (e.g., Omoto & Snyder, 2009; Yang et al., 2020), and a greater congruence between one's personal belief system, identity, and behaviour within a social context (Boyd, 2015; Boyd & Martin, 2020; Nowell & Boyd, 2010, 2014). A feeling of responsibility to protect the community is consistent with adherence to social distancing during the COVID-19 emergency (Coroiu et al., 2020).

SoC and Soc-R can be enhanced by the way in which institutions manage decisions and are perceived as legitimate and trusted (Liu et al., 2018). Indeed, competence-based institutional trust (i.e., an institution's ability to handle extreme situations; Kong, 2013) can hinder "corrosive" community dynamics (Cope et al., 2016; Slack et al., 2020). Conversely, recreancy (i.e., the perception that institutions have failed in their role to protect communities, Freudenburg, 1993) in risk perception and adaptation responses can have detrimental effects when institutions are expected to deal adequately with technological and natural hazards. Recent studies (Sibley et al., 2020; Falcone et al., 2020) have reported that public trust in the effectiveness of institutional responses to the pandemic may provide a useful tool for achieving common goals within communities and allow individuals and groups to look at uncertainty, both dampening it and managing it.

To date, few studies have investigated citizens' perceptions of the effectiveness of institutional response to the health emergency as a predictor of public willingness to comply with prescribed health measures (Clark et al., 2020; Prati et al., 2011).

To our best knowledge, no study has specifically investigated the relationship between the perception of effectiveness of institutional response to the COVID-19 pandemic, SoC, and SoC-R. The present study fills this gap by examining the relationship between citizens' perception of the effectiveness of institutional response to the COVID-19 emergency and SoC and SoC-R during the lockdown in Italy in spring 2020.

#### Reflexivity

Reflexivity refers to "the process of critically assessing the content, process, or premise(s) of our efforts to interpret and give meaning to an experience" (Mezirow, 1991, p. 104). Cassell and colleagues (2019) underline that there is a variety of benefits arising from reflexivity, including "enabling us to think about our own thinking and in questioning our own taken-for-granted beliefs and those of others" (p. 3). Reflexivity can be thought of as an

"internal conversation" that we use to think about events that occur and overcome the obstacles in our path. Through reflection, we evaluate our social contexts, imagine alternatives for our actions, and work with others to make such actions happen.

Crises and pandemics give people cause to rethink and restructure their core values, beliefs, and practices. Emergencies make people think about making changes in their own life, others' lives, and society. Reflexivity becomes a process to question tacit and often accepted beliefs that structure contexts and involve taking risks and seeking solutions to problems. In an emergency situation, the practice of reflexivity is key to identifying how existing assumptions, values, and beliefs can influence the creation of a crisis, obstruct attempts to resolve it or disclose ways of resolving it (Mascolo & Burbach, 2020). A reflective awareness of what is being threatened may lead to a change in assumptions, values, and practices, making them more responsive, collaborative, transformative, and ethical (Cunliffe, 2016). For example, results from an educational intervention during the COVID-19 pandemic (Mascolo & Burbach, 2020) show that the practice of reflexivity of parents for their children's education helped them to acknowledge a significant emergent need and recognize that the solution to educative issues resides in seizing the initiative and fostering systemic changes in existing educational structures. Reflexivity serves as a powerful mediator within the processes that drive performance, problem-solving capacity, and effective response to problems (Carmeli et al., 2014).

To date, most studies on the COVID-19 pandemic have examined compliance with protective measures, mental health, well-being and, to a lesser extent, prosocial behaviour (e.g., Clark et al., 2020; Harper et al., 2020). The few studies that have investigated individuals' perception about the future have highlighted that experiencing a community emergency increases anxiety about the future (e.g., Duplaga & Grysztar, 2021). People's reflections on the COVID-19 health emergency influence their cognitive and emotional responses to the present and their perception of the future, but few studies to date have examined this aspect (Venuleo et al., 2020a; 2020b).

With the present study, we also wanted to investigate the extent to which reflecting on emergencies can be associated with the ties that people have with their community understood as both feeling of belonging (SoC) and feeling of responsibility (SoC-R). In addition, we aimed to examine the mediating role that reflexivity about pandemic COVID-19 played in the relationship between SoC, SoC-R, and people's personal and social concerns about the present situation and their perceptions of a post-pandemic future enriched by the lockdown experience and/or as a return to previous habits and daily life.

#### The present study

Drawing on the above-mentioned literature, this study has two main aims:

- 1) Investigate the relationships between people's perceptions of the effectiveness of institutional response to the COVID-19 emergency and: SoC and SoC-R; people's personal and social concerns about COVID-19; people's perceptions about post-pandemic future, understood as both personal enrichment and as a return to prepandemic daily and working life (Marinaci et al., 2020; Sibley et al., 2020);
- 2) Investigate the associations between SoC and SoC-R and people's personal and social concerns about the pandemic and their perceptions of a post-pandemic future (Boyd & Martin, 2020) and the mediating role that a person's reflexivity may play (Venuleo et al., 2020a; 2020b).

#### Our hypotheses were:

- H1. There is a positive association between the perception of the effectiveness of institutional response to the COVID-19 pandemic and SoC (H1a), SoC-R (H1b), and the perception that one's daily life will return to as it was before the pandemic (H1c) or will be better (H1d) after the emergency; conversely, there is a negative association between the perception of the effectiveness of institutional response to the COVID-19 pandemic and current COVID-19-related concerns about oneself (H1e) and the community (H1f);
- H2. There is a positive association between SoC and the perception that one's daily life will return to as it was before the pandemic (H2a) or will be better (H2b) after the COVID-19 emergency, and there is a negative association between SoC and COVID-19-related concerns about oneself (H2c) and the community (H2d);
- H3. There is a positive association between SoC-R and the perceptions that one's daily life will return to as it was before the pandemic (H3a) or will be better (H3b) after the COVID-19 emergency, and there is a negative association between SoC-R and COVID-19-related concerns about oneself (H3c) and the community (H3d).

To best of our knowledge, no study to date has examined the relationships between SoC, SoC-R, and the extent to which people reflect on the changes that the pandemic might bring. Similarly, no studies have examined the mediating role of reflexivity on people's current concerns and the way they envision the future. Nevertheless, following the literature (Carmeli et al., 2014; Cunliffe, 2016; Mascolo & Burbach, 2020; Venuleo et al., 2020a; 2020b), we expected:

H4: a positive association of SOC and SOC-R with reflexivity;

H5: reflexivity mediates the relationship between SoC and SoC-R and people's personal and social concerns due to the COVID-19 emergency, as well as their perceptions about a post-pandemic future as a return to life as it was before the pandemic or getting better.

#### Method

The procedures in this study were in line with the ethical standards set by the Italian Psychological Association and the 1964 Helsinki Declaration. The research project was approved by the Human Research Ethics Committee at the University of [blinded for peer review].

Data were collected between 12 April and 21 May 2020. The study entailed administering an online self-report questionnaire posted on the Qualtrics platform; it relied on a convenience virtual snowball sampling approach since respondents were asked to involve other participants in turn. Participation was on a voluntary basis and no compensation was provided. Participants were contacted via email or social networks (e.g., Facebook) in which they received a brief description of the research project, an invitation to take part in a study about individual and social consequences of the COVID-19 pandemic, and a link to the questionnaire. Respondent anonymity was assured. The questionnaire was preceded by an informative letter stating the research aims, instructions for questionnaire completion and approximate duration, and information about data processing. The questionnaire took about 20 minutes to complete. The response rate (82.5%) to this online questionnaire was calculated from the ratio between the number of completed questionnaires and the number of participants who started responding to the questionnaire.

#### **Participants**

The sample was 3,925 Italian adults (women, 69.5%; mean age, 39.82 years ± standard deviation [SD] 14.25; range, 18-84; two respondents were missing on this variable and were excluded from data analyses). Breakdown of educational level showed that 32.3% had a high school diploma, 15.7% a bachelor's degree, 24.3% a master's degree, and 15.9% a postdoctoral degree (e.g., post-graduate specialization, Ph.D.); 3.9% had a vocational school diploma, and 7.9% a mandatory school diploma. Employment status was distributed as follows: 46.5% employees (the majority of which in smart working), 16.1% self-employed, 16.1% students, 4.9% researchers, 3.3% seasonal workers, 7.5% unemployed, and 6.1% retired; 2.8% declared "other occupation".

#### Measures

The following measures were used.

Effectiveness of Institutional Response. Respondents rated on a 5-point Likert scale (1 = Nothing; 5 = At all) the effectiveness of the measures taken by local and national authorities to contain the COVID-19 outbreak by answering the question: "In your opinion, how adequately are the following institutions responding to the coronavirus emergency?". Four items ("National Health System", "National Government", "Regional Administration", "Local Authorities") were retrieved from previous studies about the COVID-19 emergency [authors blinded for peer review]

**Sense of Community (SoC).** The Brief Sense of Community Scale (BSCS; Peterson et al., 2007) comprises eight items (e.g., "I can get what I need in this neighbourhood"). Respondents rated each item on a 5-point Likert scale. Answers (1 = *Strongly disagree*; 5 = *Strongly agree*). The Italian version of the scale has not yet been validated but it has been used in previous studies (Gatti & Procentese, 2020; Mannarini, et al., 2020; 2021; Prati et al., 2020) where it has shown good model fit and reliability.

**Sense of Community Responsibility (SoC-R).** The Italian version (Prati et al., 2020) of the Sense of Community Responsibility scale (Nowell & Boyd, 2010) includes six items (e.g., "It is easy for me to put aside my own agenda in favour of the greater good of my community") rated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

**Reflexivity.** Four items investigated how respondents reflected about changes due to the COVID-19 pandemic in relation to themselves ("your life"), others ("others' lives"), and society at large ("economic circumstances" and "environmental situations"). Respondents were asked to rate on a 5-point Likert scale (1 = Nothing;  $5 = At \ all$ ) how much they thought about each dimension.

**Personal and Social Concerns.** Respondents indicated their level of concern about the impact of the COVID-19 pandemic on their personal safety and on society at large. Eight items investigated concerns about how COVID-19 affected their safety (personal concerns, five items, e.g., "The possibility of being infected") and society at large (social concerns, three items, e.g., "The possibility of economic recession due to downtime") [authors blinded for peer review]. Respondent rated on a 5-point Likert scale (1 = Nothing;  $5 = At \ all$ ) how concerned they were about what was stated in each item.

**Potential Personal Impacts.** Nine items investigated how respondents thought their lives would be after the COVID-19 emergency is over. Respondents were asked to express their level of agreement on a 5-point Likert scale ( $1 = Strongly\ disagree$ ;  $5 = Strongly\ agree$ ) with

statements referring to positive changes caused by the pandemic (potential personal enrichment, e.g., "I will be able to use technologies more competently") and to the return to daily routine (return to pre-COVID-19 daily and working life, e.g., "My daily life will be the same as before the COVID-19 outbreak"). Two separate yet correlated dimensions emerged with reference to the perspective of one's daily life returning to as it was before the COVID-19 pandemic (return to pre-COVID-19 daily and working life) or becoming even better (potential personal enrichment).

**Sociodemographic measures.** Data on gender, age, educational level, and employment status were collected. Respondents were also asked whether among their acquaintances and family members (e.g., friends, relatives) there was someone with a suspected infection or had tested positive for COVID-19 (i.e., their exposure to COVID-19; 0 = No; 1 = Yes).

# **Data Analysis**

#### **Preliminary Analyses**

Since the percentage of missing data in the sample was < 10% (2%), we used pairwise deletion (Newman, 2014). The items investigating reflexivity and potential personal impacts were created ad hoc; exploratory factor analysis (EFA) with principal axis factoring and promax rotation was run for each. Sphericity was checked using Bartlett's test and adequacy of sampling using the Kaiser-Meyer-Olkin (KMO) measure. Confirmatory factor analysis (CFA) was performed to investigate the measurement properties for each measure, including the ones expected for SoC (Gatti & Procentese, 2020; Mannarini et al., 2020; 2021; Prati et al., 2020), SoC-R (Prati et al., 2020), effectiveness of institutional response [authors blinded for peer review], and personal and social concerns [authors blinded for peer review]. We calculated the omega ( $\omega$ ) coefficient to evaluate scale reliability (McDonald, 1999). We used frequency, means, and standard deviation to summarize variables. Pearson's correlation (r) was used to test the relationship between variables; correlation coefficients were interpreted according to Cohen's (1988) conventions.

# **Hypothesis Testing**

The hypothesized relationships were tested via a multiple mediation model and structural equation modelling (SEM): the effectiveness of institutional response was entered as the independent variable, while the others were the dependent variables. Assuming the hypothesized relationships, we specifically tested effectiveness of institutional response, SoC, and SoC-R as associates of personal concerns, social concerns, and potential personal impacts

during the first wave of the COVID-19 pandemic; the mediation effect of reflexivity in the relationship between SoC and SoC-R and personal concerns, social concerns, and potential personal impacts was tested. To check the model on the base of the main socio-demographic characteristics of the sample and contextual aspects related to COVID-19, we included gender (0 = woman; 1 = man), age, and exposure to COVID-19 (0 = No; 1 = Yes) as control variables. Given the presence of ordinal variables, we used the mean- and variance-adjusted weighted least squares (WLSMV) as the estimation method (Rhemtulla et al., 2012).

We evaluated model fit using different indexes to diminish the impact of their limits (Hu & Bentler, 1998): the comparative fit index (CFI), the Tucker-Lewis Index (TLI), and root mean square error of the approximation (RMSEA). For CFI and TLI, values ≥.90 or .95 were considered satisfactory or excellent. For RMSEA and its 90% confidence interval (CI), values ≤.06 and .08 reflect good or reasonable fit indices (MacCallum & Austin, 2000). We used bootstrap estimation to test the significance of the results (Hayes, 2018) with 10,000 samples, and we computed the bias-corrected 95% CI by determining the effects at the 2.5<sup>th</sup> and the 97.5<sup>th</sup> percentile; the indirect effects are significant when 0 was not included in the CI. Statistical analysis was performed using SPSS version 26.0 (frequency, means, standard deviation, correlations, EFA) and MPLUS 8 (CFA, SEM).

#### Results

#### **Preliminary Results**

Table 1 presents the descriptive statistics of the scales and bivariate correlations between them and control variables.

#### [TABLE 1]

Table 2 presents the model fit indexes for the CFAs for each scale. The CFA estimates showed satisfactory model fit for each scale. Consistent with previous empirical and validation studies, the results showed a one-factor model for SoC (Gatti & Procentese, 2020; Mannarini et al., 2020) and SoC-R (Prati et al., 2020), as well as for the effectiveness of institutional response [authors blinded for peer review] and reflexivity, while two first-order factors emerged for personal and social concerns [authors blinded for peer review] and for potential personal impact (i.e., personal enrichment and return to pre-COVID-19 daily and working life). Personal and social concerns, personal enrichment, and return to pre-COVID-19 daily and working life were entered as separate dimensions in the model (Fig. 1).

[FIGURE 1]

[TABLE 2]

The omega (ω) coefficients for scale reliability were acceptable: .91 and .90 for SoC and SoC-R, respectively; .76 for personal concerns and .88 for social concerns; .74 for personal enrichment, and .66 for return to pre-COVID-19 daily and working life; .76 for effectiveness of institutional response, and .78 for reflexivity.

# **Hypothesis testing**

The fit of the model was satisfactory,  $\chi^2$  (746) = 11274.14, p < .001; TLI .904; CFI .914; RMSEA .059, 90% CI [.058, .060]. The model explained 45.2% of the variance for personal enrichment, 56.5% of the variance for return to pre-COVID-19 daily and working life, 22.4% of the variance for personal concerns, and 36.7% of the variance for social concerns.

Table 3 presents standardized coefficients (β) and unstandardized coefficients (*B*) with their standard errors (SE) and bias-corrected 95% CI for direct, indirect, and total effects obtained from the SEM model. Consistent with our hypotheses, there was a positive and significant association between effectiveness of institutional response and SoC (H1a) and SoC-R (H1b). There was partial confirmation of the hypotheses for a positive and significant direct effect on potential personal impacts (true only for return to pre-COVID-19 daily and working life, confirming H1c but not H1d), and a negative and significant direct effect of the effectiveness of institutional response on people's concerns (true only for social concerns, confirming H1f but not H1e).

SoC had a significant and positive direct effect on personal enrichment, as expected (H2b). Contrary to our hypotheses, SoC had a significant negative direct effect on return to pre-COVID-19 daily and working life, and a significant positive direct effect on personal and social concerns: H2a, H2c, and H2d were not confirmed. The direct effects of SoC-R on return to pre-COVID-19 daily and working life were negative and significant, whereas there was a positive and significant effect on social concerns and personal enrichment: all H3 but H3b were mismatched.

There was a difference in the associations between SoC and SoC-R and reflexivity (H4): a positive association between SoC-R and reflexivity and a negative association between SoC and reflexivity.

There was a positive association between the degree to which people reflected on possible changes due to COVID-19 and their current concerns about personal and social concerns due to the pandemic. There was a negative association between reflexivity and return to pre-COVID-19 daily and working life and a positive association with personal enrichment. Our findings showed a mediating role of reflexivity, as expected (H5). There was a negative indirect

association between SoC and personal enrichment, personal and social concerns, and a positive indirect association with return to pre-COVID-19 daily and working life. There was an indirect positive association between SoC-R and personal enrichment, as well as with personal and social concerns, and an indirect negative association with return to pre-COVID-19 daily and working life.

#### [TABLE 3]

Table 4 presents the standardized coefficients (β) and the unstandardized coefficients (*B*) with their standard errors (SE) and bias-corrected 95% CI for the control variables. There was a positive association between gender and SoC-R but not with SoC. Being a woman was also positively associated with greater reflexivity and higher personal enrichment and negatively associated with both return to pre-COVID-19 daily and working life and social concerns. There were weak and positive associations between age and SoC, SoC-R and social concerns, while there was a negative association between age and reflexivity. There was a positive association between exposure to COVID-19 and SoC-R (but not with SoC), and a negative association with personal enrichment, personal concerns, and social concerns.

## [TABLE 4]

#### **Discussion**

The interplay between institutional and individual perception was highlighted in 2009 during the H1N1 (swine flu) influenza pandemic in Italy (Prati et al., 2011). In the present study, we adopted a psychosocial perspective to investigate the role of sense of community and sense of community responsibility. We investigated current personal and social concerns and perceptions of the post-pandemic future in a sample of Italian citizens during the spring 2020 COVID-19 lockdown. We wanted to examine the role of people's perceptions about the effectiveness of institutional response against COVID-19, and their SoC, SoC-R, and reflexivity about the coronavirus pandemic in relation to their current personal and social concerns, as well with the perception of the post-pandemic future.

We found partial evidence for our hypotheses: no association emerged between people's perceptions of the effectiveness of institutional response to health emergencies and personal enrichment and personal concerns. This could be explained by the fact that people believe that personal enrichment and personal concerns depend on their own choices and not only on contextual factors. In other words, this focus on individual aspects could explain the absence of a relationship between the effectiveness of institutional response to a health emergency and

perception of a post-pandemic future regarding possible positive changes, and current concerns about personal costs.

Consistent with our hypotheses, however, our data show that people's positive perception of government actions in dealing with the emergency had a protective effect on reducing their concerns about society at large and on their perceptions about returning to normal life after the pandemic. The belief that institutions can adequately handle an emergency seems to have a protective effect in mitigating the social concerns that a difficult situation such as a pandemic may generate. There was a positive association between both SoC and SoC-R and personal enrichment. That is, both these dimensions of sense of community seem to help people recognize that adaptation to the post-pandemic world will involve changes that will imply concerns but can also offer opportunities for individual growth. The unexpected negative association between SoC and SoC-R and a return to pre-COVID-19 daily and work life may be interpreted as a completely new perspective on the post-pandemic future that life will never be as it was before. Similarly, the positive association between SoC and SoC-R and personal concerns can be seen as greater engagement in the community and deeper awareness about the current situation.

An unexpected positive association was found between SoC but not SoC-R and social concerns. A plausible explanation is offered by the community experience model (Boyd & Martin, 2020), which shows how SoC and SoC-R play a key role in generating different outcomes in crisis management. Accordingly, the difference between SoC and SoC-R is not entirely surprising, since the two forms of sense of community are different albeit related constructs (Boyd & Martin, 2020; Prati et al., 2020). While SoC-R seems to indicate a greater interest in reflection about oneself (as expected in our hypothesis), SoC is associated with a lower degree of reflexivity. This seems consistent with previous evidence for SoC being related to the perception of similarity among community members, which does not necessarily imply deep personal reflection in order to be experienced (Mannarini et al., 2012; Prati et al., 2020). In a slightly different way, however, responsibility was associated with greater reflexivity probably because SOC-R solicits one's normative belief system (what I should do) and its fit with the context norms/specific conditions (what is appropriate to do in the context). Furthermore, the distinction between community as resource, typical of SoC, and community as responsibility, as in SoC-R, can be called into play: belonging to a community can underpin positive emotions and be a reassuring resource even if the need to act is missing when difficulties arise. Otherwise, if a person's tie with a community includes the feeling of responsibility for what happens, individuals will feel the desire to act and reflect on what to do to maintain a connection with their community.

The mediating effect of reflexivity provides evidence for a connection between community-related and individual aspects during the coronavirus emergency. The extent to which people reflect on COVID-19-related issues and interpret them affects how they depict the present and the future (Venuleo et al., 2020a; 2020b).

Finally, several gender-related differences emerged, highlighting differences in how women and men experienced exposure to the COVID-19 pandemic and in cognitive processing in this situation. The women seemed more inclined to reflect on the situation and to see it as a chance for potential personal enrichment perhaps because they were more willing to view the future from a novel perspective. Differently, the men seemed to worry about the general economic situation more than the women, who were less sure that their daily and working lives will return to the way they were before the pandemic. Our data indicate that the pandemic COVID-19 has, once again, revealed differences between men and women, the latter of which perceive the long-term impact of the pandemic COVID-19 on their personal and professional lives as being more permanent and less changeable (Almeida et al., 2020; Burki, 2020; Connor et. al., 2020; Czymara et al., 2021 Power, 2020).

#### **Limitations and Future Directions**

This study has several limitations. First, snowball sampling and a non-representative sample do not allow for generalisation. Second, the cross-sectional design does not allow for making causal claims about mediation pathways, so caution is warranted when interpreting the results. Longitudinal research could yield a deeper understanding of the effects of these variables. A further limitation is the skewness of our sample in some key variables, such as the over-representation of women participants and respondents with a high level of education. Finally, the use of an online survey restricted participation by individuals with access to IT devices (PC, smartphone, tablet, etc.) and to the Internet.

#### **Conclusions and Implications**

This study captures people's perceptions during the extraordinary event of a nationwide lockdown. The perceptions concern individual, relational, social, and broader political dimensions. The relationships we identified among the variables underline the need for a psychosocial perspective that encompasses various levels – from individual to social and political - and their interactions. The community-related dimensions are relevant for SoC and

SoC-R which, by drawing on the community experience model in crisis management (Boyd & Martin, 2020), proved fundamental for understanding and orienting perceptions during the emergency.

Our findings suggest that during a crisis situation people believe that feeling part of their community is important for them, as is feeling responsible for their community, to the extent that they perceive that government actions have been adequate in handling the COVID-19 emergency. Local policies and actions need to focus on developing the community context (Boyd & Martin, 2020). During exceptional events, governments play a central role in maintaining a connection with citizens that then helps shape adequate community dynamics (Cope et al., 2016; Slack et al., 2020). In doing so, national and international leaders appealed to citizens' sense of community responsibility to comply with mobility restrictions (Steffens, 2020). By the same token, policy makers should show genuine interest in the communities they govern rather than in political gain. Furthermore, they should make explicit the criteria on which they base complex decisions if they want to maintain the trust needed to exercise leadership in crisis management (Blader & Tyler, 2009; Reicher & Stott, 2020; Tyler, 2012).

#### References

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Table 1. Mean, standard deviation, and bivariate correlations between scale study variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Gender (M=0)	_	_	_								
2. Exposure to COVID-19	_	_	_	_							
3. Age (years)	39.84	14.27	_	_	_						
4. Effectiveness institutional response	3.48	0.72	001	05**	06***	_					
5. SoC	3.57	0.75	.002	.02	.13***	.23***	_				
6. SoC-R	3.65	0.70	.04*	.05**	.13***	.16***	.43***				
7. Reflexivity	3.80	0.67	.14***	.03	07***	.06***	.02	.14***	_		
8 Potential personal impacts	3.17	0.44	01	03	.02	.21***	.26***	.26***	.03	_	
9 Personal concerns	3.27	0.70	.13***	06***	03	02	.02	.08***	.29***	.06***	_
10 Social concerns	4.22	0.72	.03*	01	.13***	03	.04**	.08***	.33***	01	.24***

*Note.* n = 3,923

Gender was coded 0 if the respondent was a man and 1 if a woman; exposure to COVID-19 was coded 1 if the respondent knew someone (e.g., friends, relatives) who had a suspected infection or tested positive for COVID-19 and 0 if not.

SoC=Sense of Community; SoC-R=Sense of Community Responsibility. \*p < .05; \*\*p < .01; \*\*\*p < .001

 Table 2. Summary of CFA Model Fit Indexes for the Study Variables

variables	$\chi^2$	df	CFI	TLI	RMSEA	RMSEA 90% CI
Effectiveness of institutional response	0.24	14	1.000	1.001	.000	[.000, .033]
SoC	366.62***	16	.994	.990	.075	[.068, .081]
SoC-R	194.48***	8	.993	.987	.077	[.068, .087]
Reflexivity	20.66***	1	.998	.989	.071	[.046, .099]
Potential personal impacts	326.46***	24	.975	.962	.057	[.051, .062]
Personal and social concerns	386.79***	17	.975	.958	.074	[.068, .081]

*Note.* n = 3,923.

 $<sup>\</sup>chi^2$  = chi-square test of model fit; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval. \*\*\* p < .001.

 Table 3. Summary of direct, indirect, and total effects

Paths	β	В	(SE)	BC 95% CI
Direct effects				
Effectiveness of institutional response $\rightarrow$ SoC	.72***	0.66***	(0.05)	[ 0.59, 0.75]
Effectiveness of institutional response → SoC-R	.64***	0.98***	(0.07)	[ 0.88, 1.09]
Effectiveness of institutional response → Return to pre-COVID-19 daily and working life	.76***	0.88***	(0.21)	[ 0.58, 1.28]
Effectiveness of institutional response → Personal enrichment	.09	0.12	(0.17)	[-0.15, 0.40]
Effectiveness of institutional response → Personal concerns	23	-0.33	(0.18)	[-0.65, -0.04]
Effectiveness of institutional response → Social concerns	36**	-0.73**	(0.25)	[-1.18, -0.34]
$SoC \rightarrow Reflexivity$	06*	-0.11*	(0.04)	[-0.18, -0.04]
SoC → Return to pre-COVID-19 daily and working life	29**	-0.36**	(0.14)	[-0.62, -0.18]
SoC → Personal enrichment	.16*	0.25*	(0.05)	[ 0.07, 0.44]
$SoC \rightarrow Personal concerns$	.17*	0.26*	(0.05)	[ 0.07, 0.47]
$SoC \rightarrow Social concerns$	.22**	0.48**	(0.17)	[ 0.23, 0.78]
$SoC-R \rightarrow Reflexivity$	.23***	0.23***	(0.03)	[ 0.19, 0.28]
SoC-R $\rightarrow$ Return to pre-COVID-19 daily and working life	23**	-0.18**	(0.05)	[-0.27, -0.09]
$SoC-R \rightarrow Personal enrichment$	.20***	0.18**	(0.05)	[ 0.10, 0.27]
$SoC-R \rightarrow Personal concerns$	.10	0.09	(0.05)	[ 0.01, 0.18]
$SoC-R \rightarrow Social concerns$	.11*	0.14*	(0.07)	[ 0.02, 0.26]
Reflexivity → Return to pre-COVID-19 daily and working life	55***	-0.40***	(0.03)	[-0.46, -0.35]
Reflexivity → Personal enrichment	.47***	0.42***	(0.02)	[ 0.38, 0.46]
Reflexivity → Personal concerns	.42***	0.39***	(0.03)	[ 0.35, 0.43]
Reflexivity → Social concerns	.56***	0.73***	(0.04)	[ 0.67, 0.80]

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Indirect	ettects
1	0,,000

33				
SoC → Reflexivity → Return to pre-COVID-19 daily and working life	.03*	0.04*	(0.02)	[0.02, 0.07]
$SoC \rightarrow Reflexivity \rightarrow Personal enrichment$	03*	-0.04*	(0.02)	[-0.08, -0.02]
$SoC \rightarrow Reflexivity \rightarrow Personal concerns$	03*	-0.04*	(0.02)	[-0.07, -0.01]
$SoC \rightarrow Reflexivity \rightarrow Social concerns$	04*	-0.08*	(0.03)	[-0.13, -0.03]
SoC-R → Reflexivity → Return to pre-COVID-19 daily and working life	13***	-0.09***	(0.01)	[-0.12, -0.07]
SoC-R → Reflexivity → Personal enrichment	.11***	0.10***	(0.01)	[ 0.08, 0.12]
$SoC-R \rightarrow Reflexivity \rightarrow Personal concerns$	.10***	0.09***	(0.01)	[ 0.07, 0.11]
$SoC-R \rightarrow Reflexivity \rightarrow Social concerns$	.13***	0.17***	(0.02)	[ 0.14, 0.21]
Total effects				
SoC → Return to pre-COVID-19 daily and working life	25*	-0.32*	(0.13)	[-0.57, -0.13]
SoC → Personal enrichment	.13	0.20	(0.11)	[ 0.02, 0.39]
$SoC \rightarrow Personal concerns$	.14	0.22	(0.12)	[ 0.03, 0.42]
$SoC \rightarrow Social concerns$	.18*	0.40*	(0.17)	[ 0.15, 0.70]
SoC-R → Return to pre-COVID-19 daily and working life	36***	-0.27***	(0.06)	[-0.37, -0.19]
$SoC-R \rightarrow Personal enrichment$	.31***	0.28***	(0.05)	[ 0.20, 0.37]
$SoC-R \rightarrow Personal concerns$	.19***	0.18***	(0.05)	[ 0.10, 0.27]
SoC-R → Social concerns	.24***	0.31***	(0.07)	[ 0.20, 0.43]

*Note.* n = 3,923.

SoC=Sense of Community; SoC-R=Sense of Community Responsibility; BC = Bias-Corrected; CI = Confidence Interval \*\*\*p < .001; \*\*p < .01; \*p < .05.

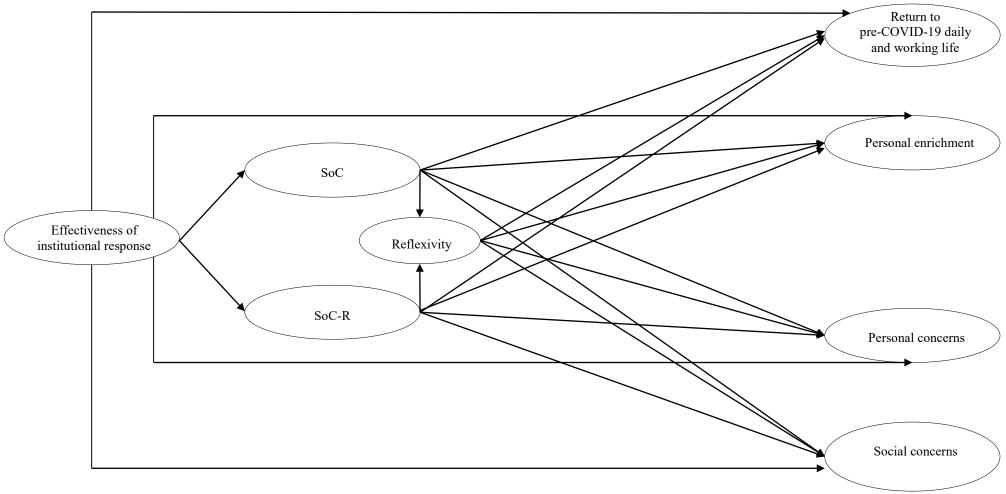
Table 4. Coefficients for the Control Variables

Paths	β	В	(SE)	BC 95% CI
$Gender \rightarrow SoC$	.03	0.01	(0.01)	[-0.01, 0.03]
$Age \rightarrow SoC$	.01***	0.004***	(0.001)	[ 0.003, 0.005]
Exposure to COVID-19 $\rightarrow$ SoC	.02	0.01	(0.01)	[-0.02, 0.03]
Gender $\rightarrow$ SoC-R	.10**	0.07**	(0.02)	[ 0.03, 0.11]
$Age \rightarrow SoC-R$	.01***	0.007***	(0.01)	$[\ 0.005,\ 0.008]$
Exposure to COVID-19 $\rightarrow$ SoC-R	.09**	0.06*	(0.02)	[ 0.02, 0.10]
Gender → Reflexivity	.29***	0.20***	(0.03)	[ 0.15, 0.25]
$Age \rightarrow Reflexivity$	01***	-0.005***	(0.001)	[-0.006, -0.003]
Exposure to COVID-19 → Reflexivity	.03	0.02	(0.03)	[-0.03, 0.06]
Gender → Return to pre-COVID-19 Daily and Working Life	32***	-0.16***	(0.03)	[-0.21, -0.11]
Age → Return to pre-COVID-19 Daily and Working Life	.003	0.001	(0.001)	[ 0.000, 0.004]
Exposure to COVID-19 → Return to pre-COVID-19 Daily and Working Life	.02	0.01	(0.03)	[-0.03, 0.05]
Gender → Personal enrichment	.24***	0.15***	(0.02)	[ 0.11, 0.19]
Age → Personal enrichment	.001	0.00	(0.001)	[-0.001, 0.002]
Exposure to COVID-19 → Personal enrichment	13**	-0.08**	(0.02)	[-0.12, -0.04]
Gender → Personal concerns	.19***	0.12***	(0.03)	[ 0.08, 0.16]
Age → Personal concerns	002	-0.002	(0.001)	[-0.003, 0.000]
Exposure to COVID-19 → Personal concerns	19***	-0.12***	(0.02)	[-0.16, -0.08]
Gender → Social concerns	09*	-0.08*	(0.04)	[-0.14, -0.02]
Age → Social concerns	.01***	0.008***	(0.002)	[ 0.006, 0.01]
Exposure to COVID-19 → Social concerns	10*	-0.09*	(0.04)	[-0.15, -0.03]

Note. n = 3,923. Gender was coded 0 if the respondent was a man and 1 if a woman; exposure to COVID-19 was coded 1 if the respondent knew someone (e.g., friends, relatives) who had a suspected infection or tested positive for COVID-19 and 0 if not. SoC=Sense of Community; SoC-R = Sense of Community Responsibility; \*\*\*p < .001 (2-tailed); \*\*p < .05 (2-tailed).

Figure 1

Conceptual model



*Note.* Control variables (gender, age, exposure to COVID-19) are not shown. Correlations between predictors and correlations between outcomes are not shown. SoC=Sense of Community; SoC-R=Sense of Community; Responsibility. For clarity, only direct effects are shown in the figure.