THE IMPACT OF THE COVID-19 PANDEMIC: PSYCHO-SOCIAL PERCEPTION OF THE CRISIS AND SENSE-MAKING PROCESSES

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The COVID-19 pandemic has generated a widespread state of uncertainty and disorientation regarding daily practices and beliefs, creating multiple sense-making processes. The purpose of the study, which is part of a larger international research endeavour, is to explore the psycho-social perception of the risk associated with the spread of Covid-19 during the lockdown in Italy (March 9th to May 4th, 2020). 2125 online questionnaire were collected in Italy and analysed with a Cluster Analysis procedure by a hierarchical classification method. We explored differences and peculiarities of the perception and appreciation of the pandemic crisis, perceived risks and resources in terms of individual attitudes, communitarian bonds, politics, beliefs and trust. Four profiles have been identified that refer to different models for assessing the situation and perception of risk; these models operate as affective-cognitive systems of sense-making and interpretation of the events occurring during the lockdown. Main psycho-social implications are discussed.

Keywords: *COVID-19 pandemic, crisis, uncertainty, anxiety, anguish, sense-making process.*

1. Introduction. The context of the study: The sudden irruption and spread of the pandemic

Since the first months of 2020, individual and collective life was strongly affected by the spread of the SARS-COV2 (COVID-19) pandemic, whose outbreak is generally acknowledged to be between the end of 2019 and the beginning of 2020 in the city of Wuhan, China. COVID-19 is a particularly virulent infection and worrying for the respiratory system. It especially affects the most vulnerable sections of the population, such as the elderly and immunosuppressed.

The concern reached its climax in the first weeks of March. The Italian Government imposed emergency safety measures such as limitations on travel, leisure activities and daily life routines. The official press releases of the Italian Prime Minister Giuseppe Conte required all citizens to *"*change their habits”; to "stay at home”; to protect their health and that of their beloved; respecting forms of protection, isolation and social confinement. Measures progressively harshened until the

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ban of all leisure and cultural activities. Most of the work in the tertiary sector was converted into *smart working*. Education at all levels was replaced with forms of distance learning.

The COVID-19 outbreak represented an unforeseen event whose outcomes are not yet fully appreciated. The Italian population was burdened by the perception of a great collective threat, of a complete uncertainty about the personal and national fate, but also about the future of humankind.

Our research is aimed to explore and highlight several systems of affective-cognitive-social sense-making processes triggered by the pandemic. We think their individuation can help to better understand the experience and the different worldviews that are implied. They are strongly affective systems of evaluations, perceptions and strategies of which very often there is no full awareness. These systems act as symbolic-cultural processes of a supra-individual kind and therefore pertain to the experience of sharing the profound crisis in progress (Salvatore et al, 2021a; 2021b; Venuleo et al, 2020; Russo, Mannarini & Salvatore, 2020). Our study highlights the substantial differences in evaluation and perception that these semiotic configurations convey. The rupture of the routine, the implicit meaning systems, and widespread disorientation triggered different ways for reading and interpreting what was happening, expressing greater or lesser trust in collective or social action, in the intervention of the state and in the current possibilities of science, in religion and in spirituality.

Our findings highlighted four specific semiotic clusters about sense-making processes for dealing with crisis; they show several systems of perception and evaluation as well as the use of several resources (in terms of individual attitudes, communitarian bonds, beliefs, political/scientific/religious-spiritual approaches) for the development of a personal/collective sense of agency and trust.

2. Uncertainty and the sense crisis in pandemic scenario

The COVID-19 health emergency fostered a generalized phenomenon of loss of orientation; absolute search for reassurance; and search for restoration of socio-cultural meta-organizers, in the attempt to re-orient one's life (Venuleo et al., 2020; de Rosa et al, 2021; Di Napoli et al, 2021). Nevertheless, one can observe people's constant and restless efforts to make sense of the events and to live with the pandemic. The human way of dealing with future uncertainty is not merely reactive, but rather purposefully proactive (Valsiner, 2011).

On the one hand, the process of sense-making of experience entails constant development and transformation. On the other hand, it always implies mediating certain forms of continuity – able of endowing psychic and relational life – with a certain level of stability and predictability. At the same time, the possibility of introducing, supporting and accepting transformations must be granted. A dynamic subjective and social dialectic is always in progress. Trajectories of meaning continuity intertwine with new trajectories of transformation, generated both by predictable events and by unexpected and perturbing ones. Such events can generate strong effects, taking on traumatic value as they become turning points (Bruner, 1990; De Luca Picione et al., 2019; De Luca Picione & Valsiner, 2017; De Luca Picione et al. 2020; Salvatore et al., 2021a; Salvatore et al., 2021b).

Therefore, situations of total surprise and sudden disruption are experienced with deep anguish and fear. They prevent the possibility of predicting what will happen in the near and far future. They are deeply affectively charged situations, in which the void of meaning, the difficulty in the construction of meaning, and the lack of interpretative criteria of what is

happening are intensely experienced (Lacan, 2007). The crisis introduces a suspended condition of social and psychic liminality (Barros et al., 2020; De Luca Picione, 2017; De Luca Picione & Valsiner, 2017; Salvatore & Venuleo, 2017; Greco & Stenner, 2017). There are different strategies available to compensate and cope with these kind of situations (Proulx & Inzlicht, 2012). The question cannot be simply reduced to the cognitive sphere (i.e. rational formulation of explanations, reorganization of models and patterns of interpretation, etc.). In such situations, many of one's habitual systems suffer a serious disruption and very intense affective experiences are lived: anxiety, fear, worry, shame, and anger.

Different theoretical perspectives specifically address those situations in which sense-making is undermined by the violation of canonicity (Bruner, 1990) or by the occurrence of crises characterized by unpredictability and by existential threats, such as mortality, uncertainty, uncontrollability or meaninglessness (Jonas et al., 2014; Tuckett & Nikolic, 2017; Anderson et al., 2019; Proulx & Inzlicht, 2012; Landau et al., 2015; Greenberg et al., 1997).

The breaking of meta-organizational frames of everyday life, due to the sudden and rapid impact of the COVID-19 emergency, has generated a series of intense reactions. As the epidemic manifested its diffuse power and its lethal effects, phenomena such as anxiety; uncertainty; fear; and perception of imminent danger have become symptoms of a common and widespread personal and social discomfort that affected the lives of millions all over the world in a short period of time (de Rosa et al, 2021; de Rosa & Mannarini, 2021; Migliorini et al, 2021; Bochicchio et al, 2021).

In fact, COVID-19 triggered important psychological processes, in which the affective-evaluative component is very intense, also with important consequences on micro-social and macro-social processes. We point out that, according to a psychodynamic perspective (Fornari, 1976; Carli & Paniccia, 2003; Salvatore, 2016; Venuleo et al., 2020), there are several indicators that point to intense affective processes at play: a) the acceleration and the overload of communication flows and information processes (until reaching situations of a real *infodemic*); b) the immediate translation of affects into unthinkable actions; c) denial and counter-phobia; d) the instant enemy of the unknown and the search for the 'plague-spreader'; e) the processes of complexity reduction and hyper-simplification according to polarized systems of meaning (good-bad; friend-enemy, alarmism-minimization, etc.).

Feeling helpless, failing to predict exactly what might happen, the threat from something not yet known, generates what has been defined as a "collective psychosis": a term commonly used by the media and public discourses during the weeks between February and March 2020 to describe the overflow of fears, the spread of panic, and the fear of being caught by surprise.

Schimmenti and colleagues (2020) maintain that four kinds of fear are at stake in the current pandemic context: (1) fear of the body/fear for the body, (2) fear of significant others/fear for significant others, (3) fear of not knowing/fear of knowing, and (4) fear of taking action/fear of inaction.

The feeling of being struck by a new and yet unknown disease has generated immediate defensive reactions, beginning from the systems of assessment of the situation and perception of danger (Brooks et al., 2020; Lenzo et al., 2020a, 2020b; Di Blasi et al, 2021; Migliorini et al, 2021; Tateo, 2020; Tateo & Dario, 2021). From a semiotic point of view, the systems of meaning construction have been strongly challenged (Venuleo et al., 2020; Salvatore, 2018; Salvatore et al., 2021a; Venuleo et al., 2020; De Luca Picione, 2020a, 2020b, 2020c; De Luca Picione & Freda, 2016a, 2016b, 2016c; Valsiner & De Luca Picione, 2017).

3. Research goals

The present study aimed at exploring different sense-making processes of people's experience during the lockdown. We expected that the collective experience of crisis due to pandemic would not generate just one single process of sense-making, in the effort to deal with the rupture of routine and value systems; rather, that several sense-making processes would produce very different systems of meaning in dealing with this unexpected situation. We intended to explore differences and peculiarities of the perception and appreciation of the crisis, the perceived risks, and the resources (in terms of individual attitudes, communitarian bonds, politics, beliefs and trusts).

Furthermore, a second line of research purposes was about if (and how) socio-demographic variables were statistically connected with the different systems of sense-making.

Synthetically, we focused on the following objectives:

a) To explore a totally new experience for the participants, namely a deep experience of crisis of meaning;

b) To identify possible recurring patterns of ways of perceiving and evaluating the emergency situation, in order to map profiles that do not refer only to single individuals but also to specific socio-cultural models, capable of giving meaning to the experience of the crisis pandemic. That is, to identify symbolic-affective-cognitive patterns that express recurrent modalities within the sample examined;

c) To verify whether there is a correlation between profiles and some socio-demographic data.

4. Methodology

4.1   Sample and sampling

Based on the premises previously highlighted, an exploratory survey was carried out by constructing an online questionnaire (in Italian language) that could be easily shared via email, WhatsApp messages and social networks. The sampling design provided for the survey through a self-administered questionnaire and shared by the participants themselves. The sampling was of the "snowball" kind. The number of participants was 2,125 (mean age: 42.6; SD: 15). The data collection period covered the interval 11 March 2020 - 3 May 2020 (this period falls entirely in the so-called PHASE 1 of the lockdown).

At the end of data collection period, the data matrix was cleaned and prepared for statistical treatment. Incomplete questionnaires were excluded, being a few statistical units. The sample size without missing data was 2,122. Therefore, the information of only 3 statistical units was lost.

All procedures performed in the study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. According to the ethical code of the Italian Psychology Association (AIP) (http://www.aipass.org/node/26) and the Italian Code concerning the protection of personal data (Legislative decree No. 196/2003), participants were informed about the general aim of the research, the anonymity of responses and the voluntary nature of participation, and signed an informed consent. No incentive was given.

The research project was previously approved by the *University of Giustino Fortunato* (Benevento, Italy) and officially received the free patronage of the *Order of Psychologists of the Campania Region* (Italy).

4.2 Instrument

The questionnaire consisted of two parts. The first part was devoted to explore the perception of the crisis through a series of items measured by a Likert scale (range from 1 *total disagreement* to 5 *total agreement*). The items were grouped in batteries, each concerning a different latent concept (considerations about safety rules; trust; future expectations; consideration about collectivity; feelings). To simplify the analysis, the variables were coded with the code of the reference block and the number of the application, as presented in Table 1:

Table 1. Sections and items used in this study

Section	Items of survey
How do I consider the prophylaxis/safety rules	Secur 4 - I think the safety measures taken have not been timely
	Secur 5 - I think that the safety measures adopted so far are insufficient
	Secur 9 - I feel that I am somehow safe from contagion
	Secur 10 - During the last weeks, I have been paying more attention to my health symptoms (e.g. coughing, body temperature, breathlessness, sneezing, fatigue, heart rate, sweating, etc.)
My Trust	Trust 1 - These days, my trust in state institutions and public authorities has increased
	Trust 2 - These days, my personal relationship with religion has intensified
	Trust 3 - These days, I feel more the need to share with others moments of prayer and spirituality
	Trust 5 - These days, my trust in science has increased
	Trust 6 - Only the progress of scientific and technological research can help us provide decisive answers
How do I imagine the future	Future 1 - I believe that in a few months the situation will get better
	Future 2 - I believe it will take years for the situation to get better
	Future 3 - I don't believe it will ever be possible to return to the living conditions as before coronavirus spread
	Future 4 - I believe we will have long-lasting aftermaths on social relationships
General considerations about collectivity	Civic 1 - Under critical conditions, everyone should try to protect themselves autonomously
	Civic 4 - Under critical conditions, coercive use of force is required to impose necessary restrictions and measures
	Civic 5 - Under conditions of uncertainty, I tend to follow and to conform to the majority of people
How do I feel	Feel 1 - I'm scared of what will happen in the next few days
	Feel 2 - I feel like I don't have control over what's going on
	Feel 3 - The conditions of uncertainty and disorientation make me anxious
	Feel 4 - I am optimistic about the solution in a short time and the full return to normality
	Feel 5 - I'm afraid of not being able to help my loved ones in case of need
	Feel 6 - I'm afraid of getting sick
	Feel 7 - I believe that my actions and choices are capable of influencing the future

The second part of the questionnaire was focused on a pool of socio-demographic variables: gender, age, education, occupation, income, geographical zone (North, Center or South Italy), type

of place living in (city center, suburb, rural area), and the perception of living in a risky place, (Table 2).

Table 2. Socio- demographic data of the sample

Gender	Man	1476(69.6%)
	Woman	646 (30.4%)
Age	<20	80 (3.8%)
	21-40	999(47.1%)
	41-65	903 (42.6%)
	≥ 66	104 (6.6%)
Geographical zone	North of Italy	252 (11.9%)
	Center of Italy	247 (11.6%)
	South of Italy	1610 (75.9%)
	Other Countries	13 (0.6%)
Living in	City Center	381 (18.0%)
	City suburb	1515 (71.4%)
	Rural area	226 (10.7%)
Place-related risk perception	Low	858 (40.4%)
	High	1264 (59.6%)
Education	Mandatory schooling	97 (4.6%)
	High school certificate	779 (36.7%)
	University	1246 (58.7%)
Occupation	Housewife	100 (4.7%)
	Private employed	475 (22.4%)
	Public servant	503 (23.7%)
	Unemployed	151 (7.1%)
	Self employed	428 (20.2%)
	Pensioner	120 (5.7%)
	Student	345 (16.3%)
Income	Low	653 (30.8%)
	Medium	1335 (62.9%)
	High	134 (6.3%)

The items were built *ad hoc* to explicitly refer to the experiences related to the quarantine and the spread of COVID-19. However, they were inspired by the congruent literature on sense-making processes with reference to the experience of unpredictability regarding the future (Salvatore et al, 2019; Salvatore & Freda, 2011; Tuckett & Nikolic, 2017; Anderson et al., 2019); on the construction of a sense of agency (Proulx & Inzlicht, 2012; De Luca Picione et al., 2018; De Luca Picione et al., 2019); and on the control compensatory processes in the event of a crisis (Landau et al., 2015). Therefore, all the items - theoretically oriented - were specifically formulated to be used with reference to the period of PHASE 1.

4.3 Data analysis

In order to perform data analysis, we carried out three steps:
1.   A Multiple Correspondence Analysis to extract the factorial dimensions;
2.   A hierarchical cluster analysis;
3.   A chi-square test of association to inspect possible correlations between the identified clusters and socio-demographic variables.

Patterns were identified by means of a *Cluster Analysis procedure* (CA), by hierarchical classification methodology. The CA was based on a *Multiple Correspondence Analysis* (MCA).

MCA can be considered as an extension of correspondence analysis aimed at detecting patterns of association among several categorical variables. In line with other research studies (Salvatore et al, 2019; Salvatore et al., 2017; Abdi & Valentin, 2007), we considered the responses to our questionnaire as categorical variables. We considered each response as a particular type of evaluation and not just as a quantitative level of agreement/disagreement. Participants could choose between five modalities: *strongly disagree; partially disagree; fairly; partially agree; totally agree*. This led us to use MCA, inasmuch it is conceived as a generalization of principal component analysis applied on categorical rather than quantitative variables (Salvatore et al. 2019; Salvatore et al., 2017; Abdi & Valentin, 2007).

MCA and CA were run on *R* statistical analysis package. Clustering was performed using Ward's minimum variance method and centroid distance criterion. Each identified profile is congruent with the criterion of maintaining the maximum similarity, as for within deviance, between the response profiles grouped in the same cluster, and the maximum differentiation, as for between deviance, in the response profiles grouped in different clusters.

The choice of the optimal partition was aimed to obtain the highest number of clusters. This classification was used for further analysis of socio-demographic variables.

5. Results

5.1 Results from multiple correspondence analysis

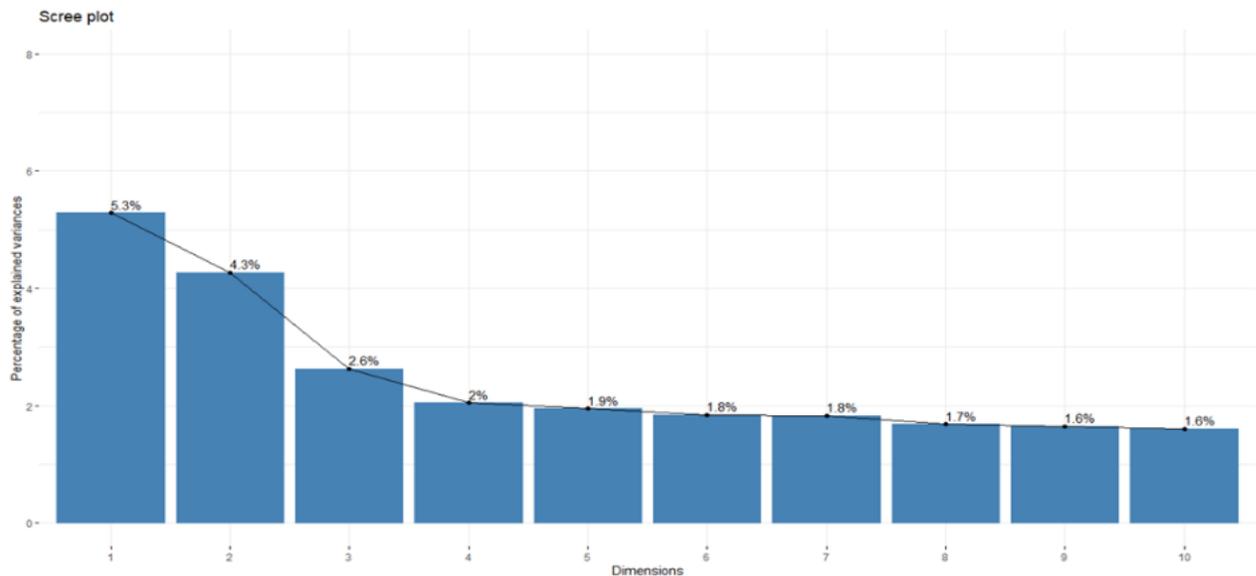The scree plot was used to determine the number of latent factors to be used in the analysis (Figure 1).

Figure 1. Scree plot of the latent dimensions of factorial plan

The gain of variance explained settled between the second and third factor. For this reason, despite the fact that the cumulative percentage of variance explained was low (12.2%), we proceeded with a three-factor analysis.

Factors are analytically described in Table 3, through the t-value of the modalities.

Table 3. Reference values of the three factors

Factor 1. Absolute helplessness vs moderate agency

Item	Modality	T-values
Feel 1 - I'm scared of what will happen in the next few days	Tot agr	-31.867
Feel 6 - I'm afraid of getting sick	Tot agr	-28.273
Feel 2 - I feel like I don't have control over what's going on	Tot agr	-27.460
Feel 3 - The conditions of uncertainty and disorientation make me anxious	Tot agr	-27.024
Secur 10 - During the last weeks, I have been paying more attention to my health symptoms (e.g., coughing, body temperature, breathlessness, sneezing, fatigue, heart rate, sweating, etc.)	Tot agr	-24.621
Feel 5 - I'm afraid of not being able to help my loved ones in case of need	Tot agr	-24.220
Civic 4 - Under critical conditions, coercive use of force is required to impose necessary restrictions and measures	Tot agr	-22.017
Future 4 - I believe we will have long-lasting aftermaths on social relationships	Tot agr	-21.478
Secur 4 - I think the safety measures taken have not been timely	Tot agr	-18.756
Trust 2 - These days, my personal relationship with religion has intensified	Tot agr	-18.705
Feel 3 - The conditions of uncertainty and disorientation make me anxious	Part disagr	16.744
Feel 6 - I'm afraid of getting sick	Part disagr	16.431
Feel 1 - I'm scared of what will happen in the next few days	Fairly	15.590
Feel 1 - I'm scared of what will happen in the next few days	Part disagr	15.501
Feel 2 - I feel like I don't have control over what's going on	Part disagr	13.170
Secur 5 - I think that the safety measures adopted so far are insufficient	Part disagr	12.523
Feel 5 - I'm afraid of not being able to help my loved ones in case of need	Part disagr	12.398
Feel 2 - I feel like I don't have control over what's going on	Fairly	12.158
Trust 5 - These days, my trust in science has increased	Fairly	11.804
Trust 3 - These days, I feel more the need to share with others moments of prayer and spirituality	Strong disagr	11.518

Factor 2. Preoccupation vs full optimism

Item	Modality	T-values
Feel 1 - I'm scared of what will happen in the next few days	Part disagr	-12.938
Feel 6 - I'm afraid of getting sick	Part disagr	-12.774
Feel 2 - I feel like I don't have control over what's going on	Part disagr	-11.715
Future 1 - I believe that in a few months the situation will get better	Part disagr	-11.709
Trust 6 - Only the progress of scientific and technological research can help us provide decisive answers	Part disagr	-11.658
Trust 5 - These days, my trust in science has increased	Part disagr	-11.316
Future 3 - I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Fairly	-10.951
Feel 5 - I'm afraid of not being able to help my loved ones in case of need	Part disagr	-10.880
Future 2 - I believe it will take years for the situation to get better	Fairly	-10.855
Future 2 - I believe it will take years for the situation to get better	Part disagr	-10.655
Feel 3 - The conditions of uncertainty and disorientation make me anxious	Strong disagr	24.432
Future 2 - I believe it will take years for the situation to get better	Strong disagr	22.923
Feel 1 - I'm scared of what will happen in the next few days	Strong disagr	22.879
Feel 2 - I feel like I don't have control over what's going on	Strong disagr	22.452
Feel 6 - I'm afraid of getting sick	Strong disagr	22.367
Feel 5 - I'm afraid of not being able to help my loved ones in case of need	Strong disagr	22.248
Feel 4 - I am optimistic about the solution in a short time and the full return to normality	Tot agr	19.907
Future 3 - I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Strong disagr	19.857
Future 1 - I believe that in a few months the situation will get better	Tot agr	19.568
Future 4 - I believe we will have long-lasting aftermaths on social relationships	Strong disagr	18.610

Factor 3. Trust vs No-Trust

Item	Modality	T-values
Trust 1 - These days, my trust in state institutions and public authorities has increased	Tot agr	-18.520
Future 1 - I believe that in a few months the situation will get better	Tot agr	-17.359
Trust 5 - These days, my trust in science has increased	Tot agr	-16.502
Feel 4 - I am optimistic about the solution in a short time and the full return to normality	Tot agr	-14.025
Trust 6 - Only the progress of scientific and technological research can help us provide decisive answers	Tot agr	-12.278
Trust 2 - These days, my personal relationship with religion has intensified	Tot agr	-11.862
Feel 4 - I am optimistic about the solution in a short time and the full return to normality	Part agr	-11.350
Future 3 - I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Strong disagr	-10.795
Trust 3 - These days, I feel more the need to share with others moments of prayer and spirituality	Tot agr	-10.338
Future 2 - I believe it will take years for the situation to get better	Strong disagr	-10.317
Trust 1 - These days, my trust in state institutions and public authorities has increased	Strong disagr	18.234
Feel 4 - I am optimistic about the solution in a short time and the full return to normality	Strong disagr	17.374
Trust 5 - These days, my trust in science has increased	Strong disagr	16.673
Future 1 - I believe that in a few months the situation will get better	Part disagr	12.858
Trust 2 - These days, my personal relationship with religion has intensified	Strong disagr	12.643
Trust 3 - These days, I feel more the need to share with others moments of prayer and spirituality	Strong disagr	12.168
Trust 1 - These days, my trust in state institutions and public authorities has increased	Part disagr	11.837
Trust 6 - Only the progress of scientific and technological research can help us provide decisive answers	Fairly	11.529
Future 1 - I believe that in a few months the situation will get better	Fairly	11.197

Factor 1 (i.e., the horizontal axis in Figure 2, labelled *absolute helplessness vs moderate agency*) moves along a trajectory that shows in its negative values great uncertainty, anxiety, pessimism towards the future, fear of getting sick, and insufficient trust in institutions. An increased sense of faith and spirituality, both individual and communitarian, is also relevant, meant as an opportunity for collective experience (the 'majority' is considered as a reference point to conform to, if the level of uncertainty becomes very high). Positive values express a moderate sense of the gravity regarding the situation: a moderate fear, a realistic sense of personal agency, and a sense of clear but not alarmist alertness. If necessary, then, any individual form of protection is considered. Yet also coercive forms of social actions are taken in account. Anyway, fear, fright, the sense of loss of control appeared very moderate. A very pragmatic position is expressed in a search for possible solutions (with no space for absolute trust in any belief system such as politics, science, and faith).

Factor 2 (i.e., the vertical axis in Figure 2 and the horizontal axis in Figure 3, labelled *preoccupation vs full optimism*) expresses a latent dimension whose polarization presents on the negative side aspects of: fear; pessimism towards future developments of the emergency; perception of the absence of individual agency; evaluation of the ineffectiveness of institutional agency and social; lack of trust in institutions; extreme individualism in facing the crisis but also conformity and adaptation to the majority in managing uncertainty. On the positive side, factor 2 includes: full optimism for the future; full sense of the individual, social and institutional control towards the management of the crisis; a profound sense of collective management of the crisis (neither in the sense of individualism, nor in the sense of conformity of the majority of people) because institutions are considered as guarantors of situations and a great trust is expressed in them.

Factor 3 (i.e., the vertical axis in Figure 3, labelled *trust vs no-trust*) is characterized by a polarization that tends on the one hand (negative values) to full trust in institutions, in religion (with a feeling of spirituality and sharing with others) and in science. Optimism is expressed, and a full positive evaluation of the security measures adopted by political institutions, as well as the feeling of being safe from contagion. On the other hand, the trend is towards the loss of confidence in science, in the progress of scientific research, and in political institutions.
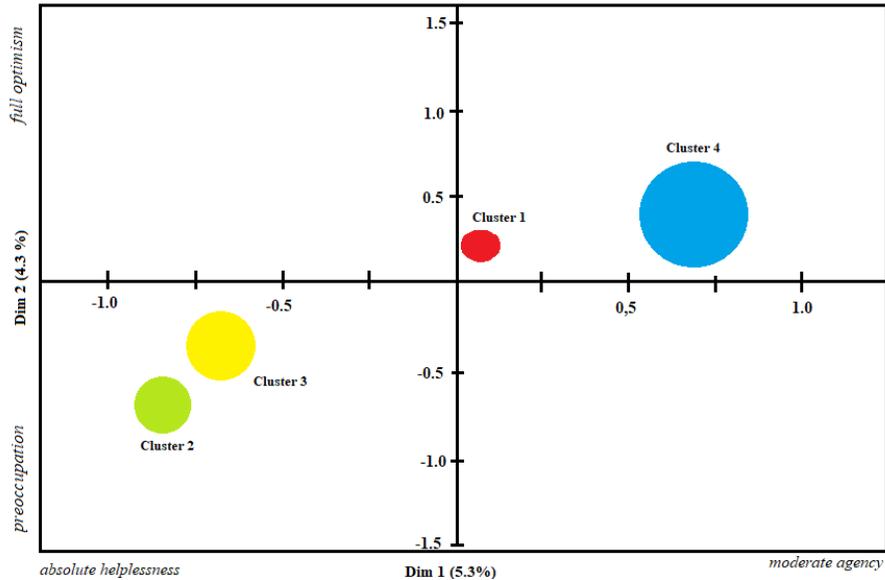

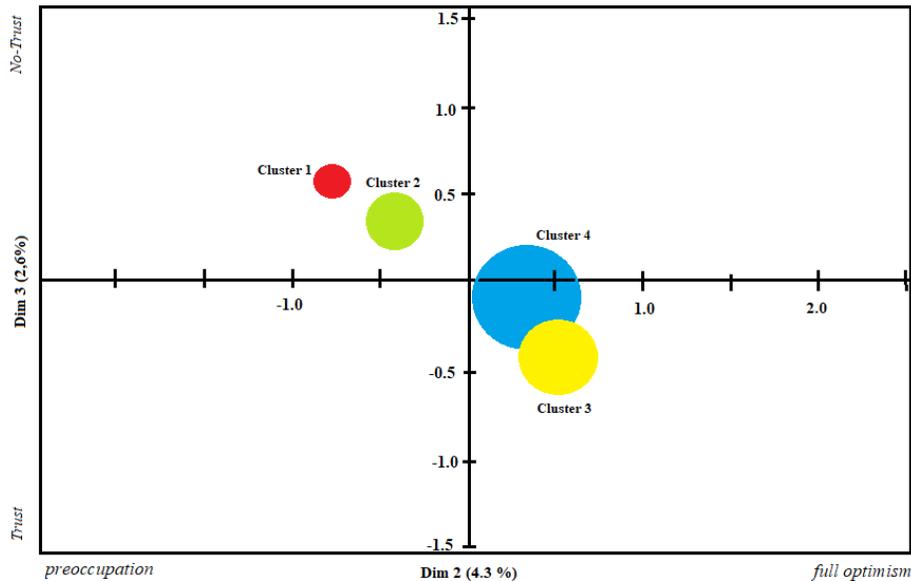**Figure 2. Factorial plan obtained from the intersection of Factors 1 and 2**

Figure 3. Factorial plan obtained from the intersection of Factors 2 and 3

5.2 Cluster Analysis

Cluster Analysis used the factorial dimensions extracted by the Multiple Correspondence Analysis.

The partition in four clusters was chosen as the optimal cluster analytic solution. Further differentiation would not have significantly increased the interclass/total inertia ratio. Figure 4 shows the total inertia gain of using an additional class. Like the scree plot, the choice fell on the number of classes in which an elbow is observed in the graph.
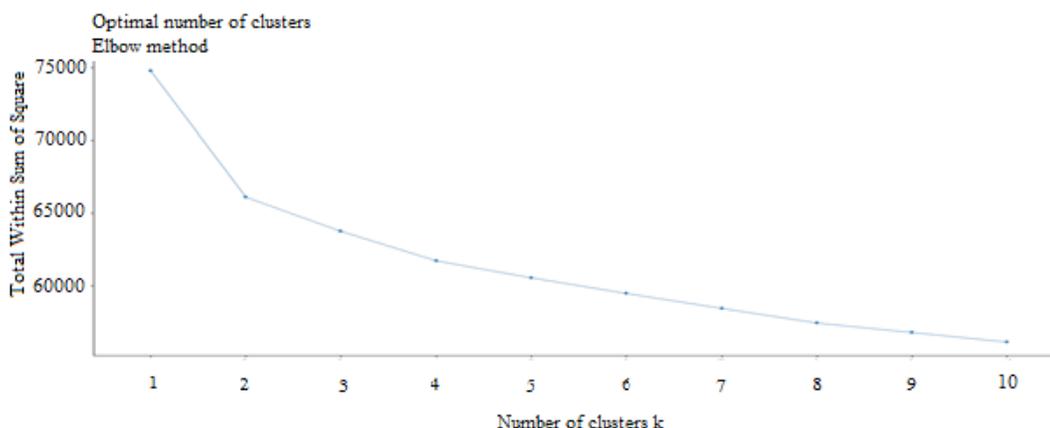

Figure 4. Total inertia of the classes

Furthermore, we used the D-index to choice the opportune number of clusters. The index is the ratio between cluster inertia and total inertia (Table 4). Furthermore, Figure 5 shows the value of the index and the second difference of it. As in the scree plot case, the optimal number of clusters is the one associated to the knee of the graphic.

Table 4. D-index

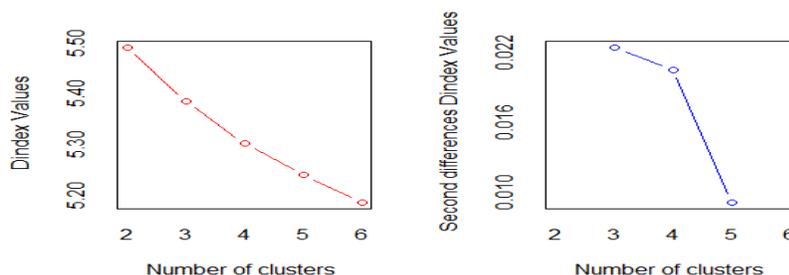| Cluster	D-index
2	5.4903
3	5.3849
4	5.3019
5	5.2394
6	5.1861

Figure 5. D-index values and second differences

As we can see in Table 4, D-index tends to decrease as the number of clusters increases, but the inertia gain tends to slow down between three and four classes. Similarly, it can be seen from Figure 5 that, although the inertia decreases as the number of classes increases, the elbow of the graph is between three and four classes and becomes evident in the graph of the second differences. For this reason, a four-class classification is chosen. The numerics of the four clusters are, respectively, 268, 411, 458 and 985. The fourth cluster is the most numerous, while the first is the less numerous. The second and third cluster have a similar magnitude.

Below, we report the analytical tables of the 4 clusters, describing and commenting on each profile.

CLUSTER 1. "Coercion and interventionism". Cluster 1 (N=268; 12.6%) is characterized by full confidence in the emergency management run by the political institutions. Even if the security measures are considered not to have been undertaken in a timely manner, they are however considered fully effective. The characteristic of this profile is full optimism about the resolution of the crisis and a good confidence in the near future with the certainty of a full return to normality. If on the one hand Cluster 1 shows full optimism, on the other hand there is however the recognition of the state of emergency and crisis (there is a moderate fear of getting sick, fear for the immediate future, fear of failing to help loved ones in case of need). Furthermore, from a civic and social point of view, Cluster 1 supports a vision based on public intervention in the effort to face the crisis. Cluster 1 is against an individualistic vision of health protection and crisis management. Furthermore Cluster 1 rejects the idea of following irrationally the majority of people in conditions of uncertainty. There is full confidence in the agency of political institutions: crisis management must be entrusted to the state (even with the coercive use of force, if the situation requires it). There is no increase in faith and spirituality - both individually and as an experience of sharing with other people - and there is full confidence in science and in the progress of scientific research to offer effective solutions.

Table 5. Analytical description of Cluster 1

Id	Items	Modalities	%modal class	%modal sample	p-value
Secur 4	I think the safety measures taken have not been timely	Tot agr	31.00%	37.10%	< 0.001
Secur 5	I think that the safety measures adopted so far are insufficient	Strong disagr	28.00%	17.90%	< 0.001
Secur 9	I feel that I am somehow safe from contagion	Fairly	35.80%	33.40%	< 0.001
Secur 10	During the last weeks, I have been paying more attention to my health symptoms (e.g. coughing, body temperature, breathlessness, sneezing, fatigue, heart rate, sweating, etc.)	Tot agr	51.10%	39.80%	< 0.001
Trust 1	These days, my trust in state institutions and public authorities has increased	Tot agr	32.50%	18.80%	< 0.001
Trust 2	These days, my personal relationship with religion has intensified	Fairly	37.30%	24.00%	< 0.001
Trust 3	These days, I feel more the need to share with others moments of prayer and spirituality	Fairly	38.10%	19.90%	< 0.001
Trust 5	These days, my trust in science has increased	Tot agr	44.00%	33.20%	< 0.001
Trust 6	Only the progress of scientific and technological research can help us provide decisive answers	Tot agr	52.20%	54.00%	< 0.001
Future 1	I believe that in a few months the situation will get better	Tot agr	45.90%	33.40%	< 0.001
Future 2	I feel like I don't have control over what's going on	Strong disagr	60.10%	38.60%	< 0.001
Future 3	I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Strong disagr	63.80%	43.30%	< 0.001
Future 4	I believe we will have long-lasting aftermaths on social relationships	Fairly	32.80%	25.90%	< 0.001

Civic 1	Under critical conditions, everyone should try to protect themselves autonomously	Strong disagr	26.10%	12.80%	< 0.001
Civic 4	Under critical conditions, coercive use of force is required to impose necessary restrictions and measures	Tot agr	54.10%	45.10%	< 0.001
Civic 5	Under conditions of uncertainty, I tend to follow and to conform to the majority of people	Strong disagr	31.70%	28.60%	< 0.001
Feel 1	I'm scared of what will happen in the next few days	Tot agr	31.00%	34.00%	< 0.001
Feel 2	I feel like I don't have control over what's going on	Fairly	26.90%	23.00%	< 0.001
Feel 3	The conditions of uncertainty and disorientation make me anxious	Fairly	30.20%	25.60%	< 0.001
Feel 4	I am optimistic about the solution in a short time and the full return to normality	Tot agr	32.80%	18.30%	< 0.001
Feel 5	I'm afraid of not being able to help my loved ones in case of need	Tot agr	31.00%	36.80%	< 0.001
Feel 6	I'm afraid of getting sick	Fairly	29.10%	26.60%	< 0.001
Feel 7	I believe that my actions and choices are capable of influencing the future	Tot agr	36.60%	37.50%	0.039

CLUSTER 2. "Apocalypticism and disorientation". Cluster 2 (N= 411; 19.3%) is characterized by an intense preoccupation that invades every sphere of the activities questioned. There is great fear, great anxiety and a sense of lack of control due to great uncertainty, and a lot of fear of getting sick. The level of optimism is quite low, while an overwhelming sense of pessimism is manifested and it is believed that it will not be possible to return to normal daily life. Similarly, it is believed that there will be effects on social relationships for a long time. The security measures taken by state institutions are considered to be untimely and ineffective. Trust in politics is only moderate. There is a strong increase in the sense of faith and spirituality, but at the same time there is a contradiction between the full idea of having to protect oneself independently and the strong tendency to follow the majority in conditions of uncertainty. There is also an increased confidence in science and research progress. Therefore, it seems that Cluster 2 shows strong disorientation in conditions of intense fear, concern and uncertainty and therefore any belief system (coercive use of force by the government, religious faith, trust in science) or social conduct (individualistic or conformed to the majority) can fulfill the function of recovering a certain sense of control over everyday life. The cluster appears to be reaching out in search of any point of reference, any foothold towards which to direct its actions and weaken the affective impact of the crisis.

CLUSTER 3. "Individualism". Cluster 3 (N=458; 21.5%) is also characterized by the valuation of the non-timeliness of the adopted safety measures and their modest effectiveness. The main elements in this cluster are the great fear of contagion and the strong attention to health, and the fear of getting sick. Cluster 3 expresses a strong sense of disorientation, fear, anxiety, uncertainty. There is a lack of confidence in political institutions, but also a lack of a sense of religious faith or spirituality to be shared collectively. Although there is moderate optimism about the immediate future, there is actually a pessimistic view of the effects of the crisis on social relations. In this cluster there is an experience of full individualism and the evaluation of the opportunity to protect oneself autonomously. In this view, the majority of people do not represent

neither a point of reference nor an example to follow in conditions of uncertainty. Both science as a system and the progress of scientific research are valued very positively.

Table 7. Analytical description of Cluster 3

Id	Items	Modalities	%modal class	%modal sample	p-value
Secur 4	I think the safety measures taken have not been timely	Tot agr	52.20%	37.10%	< 0.001
Secur 5	I think that the safety measures adopted so far are insufficient	Fairly	27.30%	27.30%	< 0.001
Secur 9	I feel that I am somehow safe from contagion	Strong disagr	34.90%	23.80%	< 0.001
Secur 10	During the last weeks, I have been paying more attention to my health symptoms (e.g. coughing, body temperature, breathlessness, sneezing, fatigue, heart rate, sweating, etc.)	Tot agree	56.10%	39.80%	< 0.001
Trust 1	These days, my trust in state institutions and public authorities has increased	Fairly	36.20%	36.20%	< 0.001
Trust 2	These days, my personal relationship with religion has intensified	Strong disagr	44.80%	39.70%	< 0.001
Trust 3	These days, I feel more the need to share with others moments of prayer and spirituality	Strong disagr	57.90%	46.40%	< 0.001
Trust 5	These days, my trust in science has increased	Tot agr	40.40%	33.20%	< 0.001
Trust 6	Only the progress of scientific and technological research can help us provide decisive answers	Tot agr	60.70%	54.00%	< 0.001
Future 1	I believe that in a few months the situation will get better	Fairly	31.90%	25.30%	< 0.001
Future 2	I feel like I don't have control over what's going on	Strong disagr	33.60%	38.60%	< 0.001
Future 3	I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Strong disagr	37.10%	43.30%	< 0.001
Future 4	I believe we will have long-lasting aftermaths on social relationships	Tot agr	36.20%	22.30%	< 0.001
Civic 1	Under critical conditions, everyone should try to protect themselves autonomously	Tot agr	46.30%	30.90%	< 0.001
Civic 4	Under critical conditions, coercive use of force is required to impose necessary restrictions and measures	Tot agr	64.20%	45.10%	< 0.001
Civic 5	Under conditions of uncertainty, I tend to follow and to conform to the majority of people	Strong disagr	29.70%	28.60%	< 0.001
Feel 1	I'm scared of what will happen in the next few days	Tot agr	62.20%	34.00%	< 0.001
Feel 2	I feel like I don't have control over what's going on	Tot agr	66.80%	36.40%	< 0.001
Feel 3	The conditions of uncertainty and disorientation make me anxious	Tot agr	50.40%	23.20%	< 0.001
Feel 4	I am optimistic about the solution in a short time and the full return to normality	Fairly	29.30%	33.60%	< 0.001
Feel 5	I'm afraid of not being able to help my loved ones in case of need	Tot agr	67.90%	36.80%	< 0.001
Feel 6	I'm afraid of getting sick	Tot agr	48.50%	24.00%	< 0.001

CLUSTER 4 - "Responsibility and solidarity". Cluster 4 (N=985; 46.4%) is characterized by a different evaluation from the other clusters with reference to the perception of the risk and

danger of the crisis. The position expressed by Cluster 4 seems to counteract the general sense of alarmism. There is no paralyzing fear of contagion or risks to one's health, just as there is no sense of loss of control, and no sense of paralysis due to anxiety or uncertainty. There is good optimism about the outcome of the crisis both in terms of the immediate and further future. While it is considered true that the measures of security could have been more timely, however they are considered to be quite effective and sufficient. The difficulty of public crisis management is acknowledged but also its intervention considered as necessary. The national state is the main entity in charge of crisis management. Both individual religious sentiment and the sense of collective spirituality have not increased. On the contrary, there is a moderate sense of individualism and a refusal to adapt oneself to the collective behavior of the mass. Instead, it is the sense of individual and social responsibility (also in terms of collective solidarity) that is valued. Unlike all other clusters, there is no increase in confidence in science, while the confidence that scientific progress can be useful and decisive increases. In this sense, we can hypothesize a vision of science as not yet capable of finding precise and clarifying answers (it is not able to provide univocal perspectives for reading the cause and the spread of the virus). Yet, there is the belief that scientific research and its progress remain the best possible solution.

Table 8. Analytical description of Cluster 4

Id	Items	Modalities	%modal class	%modal sample	p-value
Secur 4	I think the safety measures taken have not been timely	Part agr	27.90%	23.50%	< 0.001
Secur 5	I think that the safety measures adopted so far are insufficient	Part disagr	29.90%	23.80%	< 0.001
Secur 9	I feel that I am somehow safe from contagion	Fairly	35.60%	33.40%	< 0.001
Secur 10	During the last weeks, I have been paying more attention to my health symptoms (e.g. coughing, body temperature, breathlessness, sneezing, fatigue, heart rate, sweating, etc.)	Fairly	27.10%	21.50%	< 0.001
Trust 1	These days, my trust in state institutions and public authorities has increased	Fairly	40.80%	36.20%	< 0.001
Trust 2	These days, my personal relationship with religion has intensified	Strong disagr	63.00%	39.70%	< 0.001
Trust 3	These days, I feel more the need to share with others moments of prayer and spirituality	Strong disagr	69.10%	46.40%	< 0.001
Trust 5	These days, my trust in science has increased	Fairly	37.00%	29.00%	< 0.001
Trust 6	Only the progress of scientific and technological research can help us provide decisive answers	Totally agree	50.80%	54.00%	< 0.001
Future 1	I believe that in a few months the situation will get better	Totally agree	35.90%	33.40%	< 0.001
Future 2	I feel like I don't have control over what's going on	Strong disagr	43.20%	38.60%	< 0.001
Future 3	I don't believe it will ever be possible to return to the living conditions as before coronavirus spread	Strong disagr	50.50%	43.30%	< 0.001
Future 4	I believe we will have long-lasting aftermaths on social relationships	Fairly	27.10%	25.90%	< 0.001
Civic 1	Under critical conditions, everyone should try to protect themselves autonomously	Fairly	27.50%	23.60%	< 0.001
Civic 4	Under critical conditions, coercive use of force is required to impose necessary restrictions and measures	Tot agr	26.20%	45.10%	< 0.001

Civic 5	Under conditions of uncertainty, I tend to follow and to conform to the majority of people	Strong disagr	33.20%	28.60%	< 0.001
Feel 1	I'm scared of what will happen in the next few days	Fairly	38.80%	26.10%	< 0.001
Feel 2	I feel like I don't have control over what's going on	Fairly	30.70%	23.00%	< 0.001
Feel 3	The conditions of uncertainty and disorientation make me anxious	Part disagr	30.80%	18.70%	< 0.001
Feel 4	I am optimistic about the solution in a short time and the full return to normality	Fairly	36.40%	33.60%	< 0.001
Feel 5	I'm afraid of not being able to help my loved ones in case of need	Part agr	25.20%	23.80%	< 0.001
Feel 6	I'm afraid of getting sick	Part disagr	30.10%	17.90%	< 0.001
Feel 7	I believe that my actions and choices are capable of influencing the future	Tot agr	37.50%	37.50%	0.039

5.3 Relationships between socio-demographic variables and the four clusters

Table 9 shows the chi-square statistic of independence between the seven socio-demographic variables and belonging to a given cluster. In addition to the chi square test and the p-values, the standardized residuals are reported to identify the modalities that characterize each cluster.

As we can observe, the relationship between socio-demographic variables and cluster membership was statistically significant for all except income, which implies that income do not affect any cluster membership.

By observing Table 9, we can outline the clusters' profile.

- C1 *Coercion and Interventionism* is over-represented by: people over 65; retired people; and people who evaluated the place of residence in which they live as not at risk of contagion. This cluster is further under-represented by: people aged 21 to 65; and people who evaluated their place of residence at risk of contagion.

- C2 *Apocalypticism and Disorientation* is over-represented by: women; the age group 41-65; those who live in the South Italy; those who live in the suburbs; people who evaluated their place of residence at risk of contagion; housewives and public employees. The second cluster is further under-represented by: men; age groups up to 40 years; those who live in the North or Center; those who are resident in an urban center; those who evaluated the place where they live as not at risk of contagion: graduates; and self-employed workers.

- C3 *Individualism* is over-represented by: women; who evaluated their area of residence at risk of contagion; people with low education; housewives. The third cluster is further under-represented by: men; by those who have not evaluated their area of residence at risk of contagion.

- C4 *Responsibility and Solidarity* is over-represented by: men; the 21-40 age group: those who live in the North or Center Italy; residents in urban centers; those who have not evaluated at risk of contagion their place of residence; graduates; the students; self-employed workers. The fourth cluster is further under-represented by: women; the age group 41-65 years; who lives in the South Italy; who has evaluated their place of residence at risk of contagion; housewives; public employees; retirees.

6. Discussion

Through the cluster analysis we have explored different configurations between affective states (along a continuum of greater or lesser anxiety, worry, disorientation and indecision), trust in supra-individual systems (government, science, religion), sense of one's own action (in individualistic, community or mass homogenization terms), and optimistic or pessimistic evaluation with respect to future scenarios.

Four clusters with specific psychosocial organizations emerged. In detail:

• C1 *Coercion and Interventionism* expresses a worldview aimed at restoring normality, requiring the strong intervention of the state and the need for resolute and decisive interventions. This cluster has a significant relationship with the age variable (over 65) and with a perception of the place of residence as not at risk of contagion.

• C2 *Apocalypticism and Disorientation* is characterized by more intense forms of fear, disorientation, and uncertainty. There is an apocalyptic and despondent feeling. Any belief or action, even if apparently disorganized and confused, could be read as a foothold to cling to. The level of disorientation is maximum. This cluster has a significant relationship with the female gender, with the age between 41-65 years, residence in the suburbs and in the South of Italy.

• C3 *Individualism*, like the second one, is characterized by an intense fear of contagion and disease and a pessimistic view. In this cluster, there is an individualistic vision of human action with respect to the feeling of disorientation and lack of confidence in supra-individual systems. Also, in this cluster there is a significant relationship with the female gender variable, with the perception of living in a place at risk of contagion, and with a low level of education.

• C4 *Responsibility and Solidarity* is characterized by a more realistic vision of the danger, a sense of trust and hope, believing that only a collective and supportive response can cope with the emergency. A critical position is expressed both towards individualism and adaptation to mass behavior. There is a significant relationship with the age variable (young-adults between 21-40 years old), with the high level of education (graduates and students), with the male gender, with those who live in the North or Central Italy, with residents of urban centers, with those who live in areas not considered at risk of contagion.

We consider these results extremely relevant and interesting. In a certain way C1 and C4 are characterized by a sense of trust in one of the three examined systems (the state, science and religion) and a confidence in the future. Yet the former tends to overvalue the use of imposition of rules with force and obedience, while the latter favors a collective sense of collaboration to overcome the crisis. The first attitude is preferred by elders and the retired, while the second attitude is mainly held by young people and the self-employed. Anyway, both clusters show the perception of the one's own place of residence as not at risk. This point is extremely interesting for us. It seems that hope and confidence is possible only if you are not in the "eye of the storm" of the crisis (namely, you do not live in perceived dangerous place at risk of contagion).

C2 and C3 are characterized by intense feelings of fear, uncertainty and anxiety. Both present mainly an association with female gender, housewife tenure, South-Italy regions, and the perception of living in a contagion risk zone. These aspects lead us to consider that individuals falling in C2 and C3 perceive their condition as one of significant vulnerability, fragility and the sense of being abandoned (which most likely relates to a pre-existing evaluation of their status, experiences and context).

It is worth considering that members of the four clusters recall some of the most widespread and common slogans that have been disseminated on social media, the media and in the political and cultural debate.:

- *"Only the resolute intervention of the state can bring us back to normality"* (C1 Coercion and Interventionism);
- *"At the mercy of the crisis ... nothing will be the same again ..."* (C2 Apocalypticism and Disorientation);
- *"Save those who can ... everyone thinks for themselves ..."* (C3 Individualism);
- *"The risk is there ... and we can only do it together"* (C4 Responsibility and Solidarity).

These slogans – very widespread during the first quarantine period – have strongly affected and characterized the public, political and social debate. They concisely expressed deeply affective positions that characterize the perception and evaluation of the emergency.

Furthermore, while the four identified clusters have specific and distinctive configurations, they also have some aspects in common. All four clusters, in fact, have a variety of common characteristics. Firstly, there is confidence that research progress will in offer possible future solutions to the pandemic (only fourth cluster does not express full confidence in current science, while retaining confidence only in the progress of research activity). Secondly, all clusters accept the coercive use of force to impose security measures, should it be necessary. From the point of view of affective-cognitive processes, we can consider that this evaluation has compensated for the crisis of personal agency and provided an important source of reassurance for the whole community (although it also gave rise to an intense debate on the relationship between individual freedom and the imposition of restrictions). Thirdly, each cluster shows that many efforts are made to preserve a sense of agency, despite the experience of crisis and disorientation. Participants maintain the belief that one's actions may be capable of affecting the future. Although not everyone claims to feel capable of responding to the crisis with effective actions and strategies (ensuring help for loved ones, fear of the effects on health, the consequences in the short and/or long term, the need to follow the behavior of the masses, etc.), in all clusters it appears that personal agency is taken into consideration (as a value, a principle to be upheld). All clusters show that agency will have to be re-established, strengthened, sustained despite the traumatic impact of the current situation.

This leads us to make further important considerations. This in-depth study of the systems of affective-cognitive-social processes can help to better understand the experience of citizenship and the different forms of attitudes assumed. Behind each slogan, namely an affective short precipitate of a worldview, there is a condensed system of evaluations, perceptions and strategies of which very often there is no awareness (Salvatore et al, 2021a, Salvatore et al, 2021b). These systems act as symbolic-cultural processes of a supra-individual kind and therefore pertain to the experience of sharing the profound crisis in progress. Our study highlights the substantial differences in evaluation and perception carried out by sense-making processes. The rupture of meaning systems and widespread disorientation generated different ways of reading what was happening, expressing greater or lesser confidence in collective or social action, in the intervention of the state and in the potentials of science, religion and spirituality. In this sense, optimism and pessimism, alarmism and minimization, are only particular aspects of a richer system of evaluation within more complex frameworks in which we see a multiplicity of interconnected evaluations and perceptions.

Table 9. Relationship between socio-demographic variables and the four clusters

Variable	Modality		Cluster				Chi square	df	p-value
			1	2	3	4			
Gender	Woman	n	185	337	341	613	62.532	3	< 0.001
		st. res.	-0.201	6.103	2.572	-6.824			
	Man	n	83	74	117	372			
		st. res.	0.201	-6.103	-2.572	6.824			
Age	< 20	n	5	12	18	45	58.444	9	< 0.001
		st. res.	-1.751	-1.008	0.203	1.797			
	21-40	n	98	154	223	524			
		st. res.	-3.688	-4.346	0.78	5.257			
	41-65	n	136	214	191	362			
		st. res.	2.902	4.344	-0.416	-5.032			
	> 65	n	29	31	26	54			
		st. res.	2.980	0.859	-0.896	-1.926			
Geographical area	North	n	29	24	62	137	50.468	9	< 0.001
		st. res.	-0.571	-4.213	1.241	2.695			
	Centre	n	22	28	54	143			
		st. res.	-1.874	-3.398	0.113	3.847			
	South	n	214	356	340	700			
		st. res.	1.629	5.670	-0.924	-4.816			
	Other countries	n	3	3	2	5			
		st. res.	1.137	0.339	-0.545	-0.577			
Living in	City centre	n	41	51	85	204	16.929	6	< 0.001
		st. res.	-1.212	-3.262	0.38	3.079			
	City suburb	n	194	315	321	685			
		st. res.	0.385	2.622	-0.699	-1.757			
	Rural	n	33	45	52	96			
		st. res.	0.944	0.219	0.551	-1.257			
Place-related risk perception	Low	n	124	140	133	461	52.887	3	< 0.001
		st. res.	2.082	-2.931	-5.611	5.564			
	High	n	144	271	325	524			
		st. res.	-2.082	2.931	5.611	-5.564			
Education	Mandatory schooling	n	14	26	31	26	24.497	6	< 0.001
		st. res.	0.547	1.897	2.543	-3.965			

	High school certificate	n	97	164	176	342			
		st. res.	-0.188	1.495	0.861	-1.770			
	University	n	157	221	251	617			
		st. res.	-0.048	-2.268	-1.922	3.415			
Occupation	Housewife	n	15	32	30	23	87.998	18	< 0.001
		st. res.	0.731	3.274	2.096	-4.810			
	Private employed	n	64	84	113	214			
		st. res.	0.629	-1.054	1.327	-0.678			
	Public servant	n	62	136	100	205			
		st. res.	-0.235	4.983	-1.063	-2.916			
	Unemployed	n	16	28	33	74			
		st. res.	-0.781	-0.266	0.084	0.662			
	Self employed	n	54	53	83	238			
		st. res.	-0.009	-4.093	-1.233	4.266			
	Pensioner	n	24	29	24	43			
		st. res.	2.502	1.369	-0.434	-2.394			
	Student	n	33	49	75	188			
		st. res.	-1.872	-2.653	0.077	3.286			
Income	Low	n	72	124	134	323	85.799	6	0,1986
		st. res.	-1.483	-0.295	-0.793	1.876			
	Medium	n	176	269	295	595			
		st. res.	1.000	1.186	0.75	-2.225			
	High	n	20	18	29	67			
		st. res.	0.827	-1.796	0.017	0.859			

7. Conclusions

The study presents the first results of a broader research project carried out using an online questionnaire on an Italian sample, acquired with snowball sampling, through the dissemination of a questionnaire through media channels (email, messaging, social networks). The detection phase was implemented during the first Italian lockdown (PHASE 1) characterized by severe restriction of individual, family and social life.

Participation in the research was extensive (well above our expectations) and we believe that this was related to people's desire to understand what was happening. During the period of administration of the questionnaire we received several e-mails from people asking for more information about our research project or services they can turn for psychological support in relation to the crisis (we promptly directed all them towards the many free online psychological support/counselling services organized to respond to the emergency).

The sudden and unexpected COVID-19 pandemic and the first two-month period of mandatory quarantine had a profound impact. It has deeply shaken people's routines and habits, generating a crisis of meaning. It led to an individual and collective effort to make sense of what was happening, trying to find ways to reestablish agency, decision-making and forecasting capacity. In this effort, different systems of belief and knowledge have been involved (politics, religious faith, spiritual experience, trust in science and research).

These considerations also have interesting implications. For example, political communication and scientific disseminations do not produce the same effects on the entire population in a uniform way. They generate different impacts in terms of confidence and trust. Intense levels of anxiety, worry and uncertainty, and the sense of own vulnerability/fragility/abandonment, can produce very different forms of perception, strategies and actions. We can find many polarized systems: on the one hand individualistic and opportunistic forms, on the other hand forms of massive homologation; on the one hand a request for the reassuring coercive actions of government, on the other hand a sense of collective agency and active collaboration to contribute to overcoming of the crisis.

Therefore, affects, cognitions, perceptions and actions are not fragmented and autonomous systems but interconnected and multidimensional. They are not simple aspects of the inner life of individuals but acted and embodied forms that contribute to the experience of their socio-relational-cultural contexts (Salvatore et al, 2021). The pandemic is not a purely biological catastrophe that can only be treated from a medical point of view. The pandemic is a critical event that acquires its meaning within different political, economic and social contexts. Strategies of security, of coping, of resolution, of experience-elaboration and of support cannot help but consider this complexity. In fact, these strategies need to extend beyond the obvious imperative of health planning and mental health in order to consider wider phenomena. The pandemic is experienced at political, social and cultural levels, before being individual and is grafted onto a terrain already characterized by the fragility of institutional and social ties, a profound economic and financial crisis and new ideological trends (e.g., populist and xenophobic) (Salvatore, 2018; Salvatore et al, 2021b).

Although our study has only referred to sense-making processes experienced during the first two months of the lockdown, it can help us to reflect on other pandemic events. This includes the perception of vaccination campaigns, whose circumstances have been characterized by manifold systems of sense-making: from a great hope, to the strong hesitancy, skepticism and sense of hoax;

from a sense of social responsibility to a protection of individualistic freedoms, etc. Such issue has already been found in previous studies (Rochira et al., 2019) and direct our attention, again, on the importance of social bonds, as trustable systems.

Such considerations lead us to consider the significance of a growth in collective responsibility, social belonging and community (Verbena et al., 2021; Mannarini et al., 2020) to counteract the many forms of distrust, mistrust, individualistic attitudes or conformist adhesions to commonsense. Overcoming the pandemic crisis will require the development of these forms of sociality, and the reconfiguration of sense-making processes.

8. Limitations and future direction of research

The results of the present study should be considered in light of some limitations.

Firstly, this research is based on a convenience sample based only on Italian participants. However, through an international network of academic scholars, the same questionnaire was translated into a wide range of languages (Spanish, Portuguese, English, French, German, Estonian, Japanese, Russian, etc.) and administered in other countries during the spread of the pandemic. The results of this research will soon be compared with a larger and more diversified international sample.

Furthermore, the sampling design (i.e., snowballing) is unbalanced with respect to some socio-demographic categories. This reduced variability may have influenced the quality of results, such as the characterization of clusters with respect to socio-demographic variables or even the response profiles determined by the clusters.

According to our results, the sense of one's own vulnerability and fragility appears to be related to sense-making processes. Furthermore, the perceived weakness of social bonds seems to be a factor when considering the impact of the pandemic. That leads us to be concerned about the experience of vulnerable members of the community, including children, the refugee population and those with physical or psychological disabilities who were not included in our study. This is a common limitation in pandemic research that requires urgent attention. (see Dalton et al., 2020; IASC Reference Group on Mental Health and Psychosocial Support, June 2020).

Acknowledgement

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