Are Italian youngsters adequately equipped for an after-pandemic upswing?

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1. Introduction

Since the onset of the severe acute respiratory syndrome (SARS) epidemic caused by coronavirus, many studies (e.g. Xiang et al., 2014; Mental Health Commission of Canada, 2020) demonstrate that such a large scale and long-lasting infectious disease—being a traumatic social shock—has a grave impact on public mental health, causing strong negative emotions and psychological and mental disorders, such as depression and anxiety.

In this research, we analyse the results of a survey on the effects of the COVID-19 pandemic on Italian youth, focusing on the disrupting effects of the coronavirus outbreak on people's perception of their possible future. We hypothesise that as the pandemic is approaching its end, an imminent radical change in lifestyles can occur that would not only recover the pre-pandemic normality but also frame social behaviours in a more sustainable way than before. For youth, the future contains a projection of the strategic roles one is prepared to play in the natural process of replacing the older generation.

This paper describes how Italian youth experienced the COVID-19 pandemic and how they tend to face their future. The research questions are as follows:

H1: Did COVID-19 infection cause youth depression and, consequently, affect their perception of the future?

H2: Is youth depression blurring their vision of their future social role?

H3: Do proactivity and self-efficacy counterbalance depressive symptoms and malaise, creating a positive vision of the future among youth?

H4: Which characteristics make youth more prone to having a blurred vision in the after-pandemic upswing?

The rest of the paper is organised as follows: Section 2 describes the researched sample and introduces the model and the methodological aspects for the data analysis; Section 3 presents the main results of the statistical analysis of the collected data; and finally, Section 4 interprets the data with reference to the mainstream literature and concludes the work.

2. Data and methods

2.1. The data

A sample of Italian adults was surveyed from June to November 2021 using the computer-assisted web-based interviewing (CAWI) technique. A total of 817 respondents collaborated with the survey, filling in an electronic questionnaire, of which 428 respondents, aged between 18 and 34, were chosen as the sample for analysis. The sample is moderately unbalanced toward central and northern Italy, being 74% of respondents against 64% of Italians aged 18-34.

Below is a set of descriptors of youth mental states and their possible predictors. The variables used in the relational model are as follows:

Y: The respondent has a clear vision of what they will do after the pandemic. Although this

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question was posed in a dichotomous way, it was the last in the series of questions on the attitudes to the pandemic experience, so the responses to the question can be considered informed and will be referenced to study the youth's ability to determine their future.

X_1: Full-blown depression (dichotomous; computed using the nine-item PHQ – Patient Health Questionnaire proposed by Spitzer et al. (1999) and translated into Italian by Mazzotti et al. (2003); the value of cumulative responses ≥ 10 identifies the diagnosis of major depression).

X_2: Passive attitude (dichotomous; obtained by a factor analysis of a set of eight items related to pessimism-proactivity, keeping the standardised scores below -0.25; the 8 items were selected from the 20 items proposed by Beck et al. (1974) to construct the Beck Hopelessness Scale).

X_3: Proactive attitude (dichotomous; obtained by a factor analysis of the set of the eight items related to pessimism-proactivity mentioned above, keeping the standardised scores above 0.40).

X_4: Self-efficacy score (continuous; obtained by a factor analysis of a set of nine items related to individual self-effectiveness and resilience: the items were selected from the 25-item Connor and Davidson [2003] resilience scale and translated in Italian by authors).

$X_5 \div X_{24}$: see the description in Table 1.

2.2 The analytical model

The model for the data analysis includes having clear ideas about the after-pandemic future as a dependent variable Y and two sets of possible regressors, from X_1 to X_4 and from X_5 to X_{24}. This relationship can be expressed as:

$$Y=f(X_1 \div X_4, X_5 \div X_{24}).$$

After a bivariate or trivariate correlation analysis between Y and the first set of possible regressors, a multiple logistic regression model was fitted. The logistic regression can be expressed as follows (Hosmer and Lemeshow, 2000):

$$logit \; [p(Y = 1)] = \beta_0 + \beta_1 X_1 + \cdots + \beta_{24} X_{24},$$

where $logit(p) = ln[(p/(1-p)]$, and β_i measures the relation between Y and X_i when all other variables in the model remain fixed. A regressor enters the model only if it is statistically significant.

The statistical analyses were carried out in the R environment (R Core Team, 2022); a logistic regression model for a binary response variable was performed with the *glm* function from the MASS package. Moreover, the *stepAIC* function was utilised to perform stepwise model selection with the *AIC* criterion.

3. Results

As shown in Table 1, 62.6% of the Italian youth have a clear view of their after-pandemic role, whereas 37.4% are unable to imagine how their future life could develop, which can stem from the individual pandemic experience, mental health status and character traits.

The diffusion of mental health problems, measured with a depression diagnosis, concerns almost one out of two young people: an estimate of 44.4% depressed signifies that youngsters are a population layer that has suffered mentally due to the pandemic more than others. This depression rate is significantly higher than that of older adults (33.7%).

Bearing in mind that young Italians undergoing a therapy for a mental disease comprised 4.4% before the survey, that mental illness is difficult to assess in young people and the quota remains concealed, and that our data were collected when the health crisis was still ongoing, it can be stated that the pandemic has caused a flood of psychic disturbances, including eating disorders (34.1%), sadness/desperation (31.8%) and self-harming disposition (6.1%).

It can also be noted that the number of young individuals consuming wine or beer at meals and consuming spirits has increased by 9.1% and 9.3%, respectively (minor consumption is 19.4% and 24.1%, respectively), compared to the numbers before the pandemic. Thus, social isolation has not curtailed drinking habits.

Table 1. Mean of the variables used in the statistical analysis of the youth in Italy, 2021

Variable	mean	Variable	mean
Y: Clear vision of the future	0.626	X_{12}: Suffered psychologic damages	0.451
X_1: Full-blown depression	0.444	X_{13}: Suffered physical damages	0.154
X_2: Passive attitude	0.416	X_{14}: Had controls through swabs	0.666
X_3: Proactive attitude	0.248	X_{15}: Had a psychic disease	0.044
X_4: Self-efficacy score	0.000	X_{16}: Male (gender)	0.357
X_5: Trusted scientists	0.787	X_{17}: Age 25-34 (*vs.* 18-24)	0.236
X_6: Family doctor available during pandemic	0.402	X_{18}: Higher education degree	0.348
X_7: Hospitals were a source of contagion	0.103	X_{19}: Worker (*vs.* else)	0.154
X_8: Vaccinated: Yes	0.638	X_{20}: Living in a couple family	0.320
: Not yet	0.271	X_{21}: Remote learning/working	0.930
: Never	0.091	X_{22}: Eating disorders	0.341
X_9: Doubting about vaccine efficacy	0.098	X_{23}: Sadness, desperation	0.318
X_{10}: Infection: personal	0.143	X_{24}: Self-harming	0.061
X_{11}: Infection: parents	0.222		

The analysis of correlations (Table 2) reveals that depression causes the difficulty in perceiving one's role in the future ($r = -0.340$, $p < 0.001$) and passive attitudes ($r = -0.357$, $p < 0.001$) and that individual clarity about the future correlates with one's proactivity in facing life problems ($r = 0.354$, $p < 0.001$) and self-efficacy attitude ($r = 0.303$, $p < 0.001$).

Table 2. Correlation coefficients between the variables used in the statistical analysis of the youth in Italy, 2021 (used to test H1, H2 and H3)

	X_1	X_2	X_3	X_4	X_{10}	X_{11}	X_{12}	X_{13}
Y: future clearness	-0.340	-0.357	0.354	0.303	0.080	0.052	-0.251	-0.058
X_1: depression		0.257	-0.197	-0.355	0.012	-0.013	0.334	0.165
X_2: passivity			-0.484	-0.278	-0.032	-0.006	0.112	0.007
X_3: proactivity				0.268	0.014	0.032	-0.107	-0.035
X_4: self-efficacy					0.075	0.097	-0.116	0.043

It should be highlighted that no viral infection (either in respondents or parents) is statistically correlated with any of the psychological variables Y and X_1 through X_4 (columns X_{10} and X_{11} in Table 2). In a similar vein, the physical consequences of the disease co-vary with depression ($r = 0.165$; $p = 0.001$), although without any other psychological status. Instead, the psychological consequences of the pandemic highly correlate with both the difficulty in forming one's own outlook ($r = 0.251$, $p = 0.001$) and one's depressive status ($r = 0.334$, $p = 0.001$). The youth are at risk of psychological distress not because of the contagion itself but because of the contextual conditions of the pandemic. Instead, reduced physical contact with peers, the manner in which incumbent health risks were communicated as well as procrastinated closing of the emergency are likely to be at the root of such a diffused malaise.

The analysis (Table 3) proves that youth perceive their future more clearly if the pessimistic views due to the pandemic are limited and if they possess proactive and other positive attitudes. The only physical variable that improves the individual outlook on the future was involvement in distance learning and remote working that the youth practiced during lockdowns and occasionally after that. As a whole, 93% of youth were involved in activities from remote. We can conjecture that keeping youth busy and favouring their participation in the management of

the pandemic could have enhanced their disposition to the future instead of fostering inactivity and removal of responsibilities, which have opened the Pandora's box of youth mental problems.

Another relevant result is the absence of gender's role as a predictor, although being a female correlated with both difficulties in the outlook on the future and depression, which means that the variables in the model explain the gender differential.

Table 3. Beta estimates of the regression model with clear vision of future as the criterion variable (forward stepwise selection of regressors, n=428; Nagelkerke pseudo-R^2=38.1%; AIC criterion=441.6)

Regressor	$\hat{\beta}$	$se(\hat{\beta})$	Signific.
Intercept	0.469	0.459	NS
X_3: Proactive attitude	1.766	0.429	***
X_1: Full-blown depression	-0.801	0.255	**
X_2: Passive attitude	-0.713	0.255	**
X_{12}: Suffered psychological damages	-0.783	0.247	**
X_4: Self-efficacy score	0.200	0.067	**
X_{15}: Had a psychic disease	*-1.518*	0.685	*
X_{21}: Remote learning/working	1.034	0.451	*

*** < 0.001; ** < 0.01; * < 0.05; NS= Not significant

4. Discussion and conclusion

This work aimed to highlight that the worries that the pandemic caused among Italian youth can threaten their future. The research reveals that 45% of young Italians felt depressed and 38% were unable to imagine their future after the pandemic. This worrying outcome recurs in This work aimed to highlight that the worries that the pandemic caused among Italian youth can threaten their future. The research reveals that 45% of young Italians felt depressed and 38% were unable to imagine their future after the pandemic. This worrying outcome recurs in many studies (e.g. Ettman et al., 2020; Eurofound, 2021; Renaud-Charest et al., 2021).

In general, young people have been lightly affected by the disease, showing a lower risk of contagion and even lower consequences. As Commodari and La Rosa (2020) suggest, young individuals perceived the disease as less damaging. Moreover, the threat of susceptibility to and the severity of a potential infection with the virus has notably decreased during the pandemic, particularly following the discovery of the vaccine (Rupprecht et al., 2022).

Imposed confinement did not increase anxiety-depression symptoms; in fact, these symptoms decreased during lockdowns (Muzi et al., 2021). Youngsters used various means of communication to stay connected with their schoolmates and friends at any time of the pandemic, more or less in the same manner as they used to do before. They did not suffer from a lack of communication; on the contrary, it was the frequent use of social media as a potential source of health news regarding COVID-19 that may have caused psychological disorders, further disposing youngsters to panic, distress and anxious-depressive symptoms (Higuchi et al., 2020). Moreover, the endless prolongation of the emergency, complete change of all structured occupations (school, work and training) and economic and occupational concerns may have contributed to the overall anticipation of an insecure and worrying future, causing psychological distress and depressive ailment, worsening pre-existing vulnerabilities and repressing proactive attitudes (Power et al., 2020; Steele, 2020; Esposito et al., 2021; Muzi et al., 2021; Rania and Coppola, 2022; Chadi et al., 2022; Rupprecht et al., 2022) so much so that the mental problems left on the ground by the pandemic have far surpassed the less frequent and harming effects of the virus contagion (Shuster et al., 2021).

Individuals who have experienced such a traumatic event not only have difficulties in finding their own strategy to cope with the trauma and its sequelae but are also conditioned to trying to define a strategy for their future (Liang et al., 2020). The changes brought about by

the pandemic have been so pervasive and increased people's insecurity so much that it has become a common assumption that the changes do not end with the health emergency—rather, pessimism has become a generalised feeling (Barrafrem et al., 2020).

Youth, by nature, develop imagining their future day by day and looking for the means to construct it. The power of choosing, changing, creating and even fighting to impose their will is intrinsic to youth development. Therefore, if the future is perceived as too worrying or insecure, youth can lose the sense of time continuity, which can transform their lives into a series of empty times. The pandemic outbreak diffused apathy and pessimism, slowed down social growth and instilled discontent and depression in youth minds. Moreover, the perception of insurmountable and prolonged social and economic difficulties caused by the possible lack of resources added pressure in youth minds. Even during the decade before the pandemic, young individuals showed high levels of mental disorder with a feeling of helplessness, depression and thoughts of suicide. The pandemic exacerbated the situation for many and helped just those who could spend more time within their families. Scholars argue that young individuals have the necessity to take an active part in societal activities in order to gain confidence for the future. Hence, resuming offline school activities as much as possible could have helped students because schools, being inclusive and safe, provide them with opportunities to engage with their communities and be mentored by supportive adults.

We are not able to forecast how long this dramatic situation could last, in particular for marginalised groups. Economists conjecture that social booms and busts are temporary phenomena. Though, studies (Power et al., 2020) show that the effects of social shocks persist for long, in particular for those who enter the job market during a recession. And, even worst, for those who are not able to enter the job market. What is going to happen to the youth who are going to enter their productive life after such a lengthy pandemic?

While it is not possible to forecast how long this deplorable situation will last, especially for marginalised groups, studies (e.g. Power et al., 2020) show that the effects of social shocks persist for long, in particular for those who enter the job market during a recession, and even more so for those who are not able to enter the job market. This can be especially detrimental for the future of the youth who are yet to enter their productive lives after a lengthy pandemic.

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