



# Everybody hurts: a survey on mental health in academia

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## Abstract

The impacts of the pandemic were multiple: health, social, economic, political, on quality of life and well-being. The aim of this project is to attempt to study the mental health status, the problems of which are constantly increasing, of Italian academic social scientists experiencing difficulties during the pandemic period, as they play a relevant role within society, trying to construct an index identifying their level of malaise using exploratory factor analysis and logistic regression.

**Keywords** Mental health · Italian academic social scientists · EFA · Logistic regression

## 1 Introduction

The Covid-19 pandemic is a dramatic experience of global risk and crisis, in which uncertainty became endemic as disruptions to daily life took precedence over plans for the future. The impact of the pandemic was manifold: health, social, economic, political, on quality of life and well-being. The aim of this project is therefore to study the state of mental health of Italian social scientists – with particular reference to academic social scientists – and the hardships experienced during the pandemic period, since political, economic and social decisions of the community also depend on their studies: they play a relevant role within society.

Mental health problems among academics are steadily increasing and exacerbated by the pandemic situation; there are increasing levels of depression, stress, anxiety, suicidal instincts, uncertainty, financial stress, disruption of social networks, burnout (Johnson and Lester 2021). Not only did the pandemic disrupt students' education by converting learning

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into virtual learning and disrupting their social networks (Marelli et al. 2021; Quintiliani et al. 2022; Busetta, Campolo, Panarello, 2024), but it also severely affected the work of professors and researchers (Marroquín et al. 2020). Moreover, female lecturers took on more of the burden of both professional and personal responsibilities during this period (Buckle 2020; Kowal et al. 2020; Minello 2020; Minello, Martucci, Manzo 2021). All this is in addition to a lot of effort, not only for courses creation, but also for ongoing research, as there is always something more that could be read, written, studied, updated. Therefore, it is important to recognise one's limits and establish boundaries in order to seek a balance (Johnson and Lester 2021, 3).

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 2013). In our society, it seems almost unacceptable to externalise one's vulnerability. Two opposing attitudes seem to derive from vulnerability and its awareness or non-awareness: the idea of having unlimited possibilities, or seeing the individual as completely lacking in agency and always in need of help. A new concept of frailty is beginning to emerge, encompassing physical, cognitive and social problems: in addition to the biological, there is also the psychological and social. Frailty means increased vulnerability, related to human uncertainty and the insecurity of the relationship with the external environment. Existential suffering results from the crisis of the relationship between the person and his/her social microcosm (Giarelli 2018). The crisis of subjectivity leads to an inability to give meaning to our being in the world, and this suffering could be exacerbated by technological transformations that involve the artificialisation of social life.

Ours is a performative and accelerated society (Rosa 2010) that demands multitasking and leads to depression, burnout, an individual exhausted by the pressure to perform who ends up self-aggrandising and self-destructing, creating the society of fatigue (Han 2012). The performance society emphasises an excess of positivity and minimisation, a rejection of suffering and its unacceptability. People do not talk about suffering for fear of being ostracised or isolated. Hidden suffering thus causes widespread malaise, anxiety and illness.

Academics are professors and researchers working in public and private universities throughout the country. The academic profession encompasses various tasks, including the performance of scientific research activities and the performance of teaching activities (Rostan and Vaira 2011). Such activities include educational responsibilities towards students, fundraising, the impact of the publish-or-perish culture, and the evaluation of research performance, all of which have been accompanied by a loss of prestige of the academic role in recent years (Watermeyer and Olssen 2016; Urbina-Garcia 2020; Johnson and Lester 2021; Cellini et al. 2020).

The "accelerated turn" have affected every aspect of the academic's work, creating situations of discomfort, anxiety, stress, due to the evaluation that entails more standardisation of teaching and is seen as an imposition, the strong demand for publication (increasingly marked by public or perish), whereby very often it does not matter how one publishes, but where and how much one publishes. It seems to be a question of survival, figuring out how to carry out one's research, one's studies, what to study, where to publish and in what time-frame, obviously at the expense of creativity and real scholarly interests. The risk is the one described by Henderson et al. (2016): the *academicwritingmachine*, an extremely dangerous machine that attacks and demolishes the scientific creativity of researchers, reducing them to "mechanical writers" without thought (Fassari and Lo Presti 2017). Being a professor is a combination of prior learning, funding opportunities, materials, mentorship, theoretical traditions and deep inertia of the research infrastructure. These, move in spaces

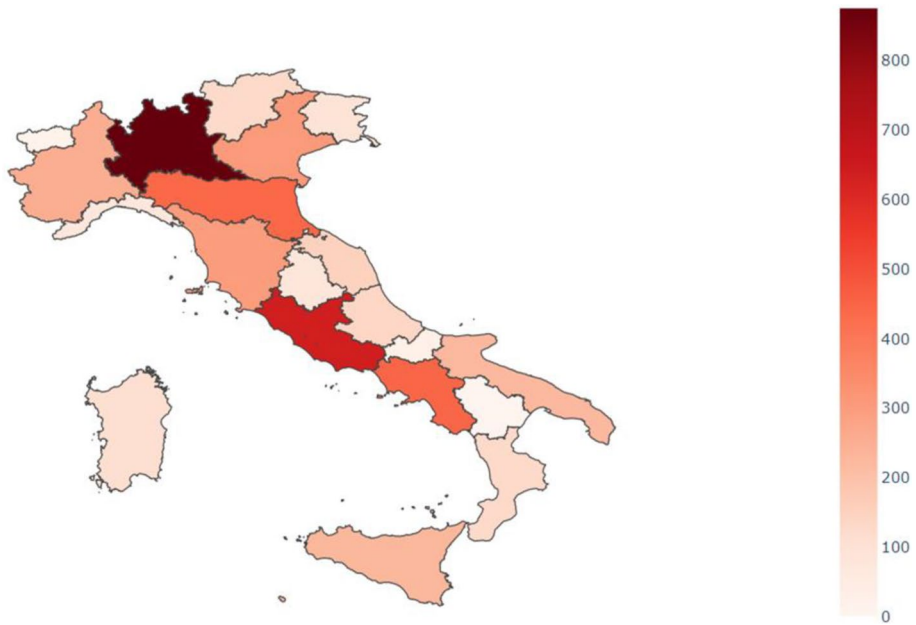
of negotiation, where practices of inclusion and exclusion exist. Universities are worlds characterised by segments, subdivisions, changing configurations of commitment, reorganisations and realignments (*ibid.*). The anxiety, stress, and discomfort of academics also depend on the evaluation processes: when based solely on quantitative criteria causes damage on many levels, including a real “academic pollution” due to the constant increase in the number of (often poor quality) publications (Sørensen and Traweek 2022, 189).

In addition, the following are contested “all or most aspects of current research policy, including the increasing emphasis on ‘excellence’, the growing reliance on bringing in external income for research in a highly competitive grants culture and the trend towards the further concentration of research funding. Concern centred around two key inter-related themes: the implications for research itself and the impact on academics/academic work. Several participants expressed concerns that current developments were likely to privilege certain kinds of research and researchers and exclude others, with small-scale, qualitative, critical, innovative and/or feminist research thought to be at risk. Taking risks in research such as “branching out into something fairly left-field, or building imaginative but risky interdisciplinary collaborations” (Leathwood and Read 2013, 1172). “The organisational territory of academia has become heavily gridded by consuming requirements to produce publications that ‘count’. To survive, the scholar must plug herself into this machine—a heaving, monstrous *academicwritingmachine*. She must invest libidinal energy into the process of counting if she desires to be counted” (Henderson 2016, 4). “Writing for publication is never-ending and never-beginning. Publication plans developed and submitted. Journals scanned and critiqued. Is it on the ‘list’ and does it meet the quantitative requirements to compete in the processes of counting? Counting publications, counting outputs, counting citations. We have become counting machines. We are machinic” (ivi, 6). These aspects are then exacerbated by the pandemic, which has forced academic staff to distort their way of working, causing burnout, depression, anxiety, insomnia, languishing states (Keyes 2002), i.e. a sense of stagnation and emptiness, absence of well-being, apathy that does not allow the individual’s capacities to be put to work, extinguishing motivation (Grant 2021). “The mental health continuum consists of complete mental health are *flourishing* in life with high levels of well-being. To be flourishing, then, is to be filled with positive emotion and to be functioning well psychologically and socially. Adults with incomplete mental health are *languishing* in life with low well-being. Thus, languishing may be conceived of as emptiness and stagnation, constituting a life of quiet despair that parallels accounts of individuals who describe themselves and life as ‘hollow’, ‘empty’, ‘a shell’ and ‘void’” (Keyes 2002, 210).

## 2 The Italian situation

The aggregated data of Italian public and private universities are provided by *Cineca*, which is a service provided by the Ministry of education. There are 98 universities in Italy, of which 67 are public and 31 privates (Fig. 1).

The Italian region with the highest concentration of academics is Lombardy (northern Italy), followed by Latium (central Italy); both regions have the highest number of both public and private universities) and followed by Emilia-Romagna (north-eastern Italy; only public universities) and Campania (southern Italy; both public and private universities). At the end of 2020, there were 23,147 associates, 18,773 researchers and 14,161 full professors in Italy.



**Fig. 1** Map of academic attendance by region to 2021 *Source* personal processing from *Cineca* data

The choice of this population was dictated by the fact that, during the pandemic period and the various lockdowns, doctors and specialists were unreachable, so the decision to deviate to academics meant that phenomena could be studied by referring to people who could be reached telematically, given the nature of their work. Furthermore, there is a tendency to often study the welfare of students (see Busetta, Campolo, Panarello 2023; Mekonnen et al. 2023) and doctoral students (Tontodimamma, del Gobbo, Corbo, 2024), while there are few studies on the precarious and now structured. The research question is therefore whether there are elements that can improve the quality of life of the chosen human capital, since, among other things, the political, economic and social decisions of the community also depend on their studies as they play a relevant role in society. Indeed, the university is an important sector for the country's research and development, as the pandemic itself has shown. There is also an attempt to improve the attractiveness of the university, if the conditions of the professors are optimal, the services provided will also be optimal and, consequently, the students will benefit.

### 3 Methods and data

The study and analysis phases of the project were carried out as follows:

The research technique adopted for our study is the web survey, submitted to the community of social scientists currently active at both public and private Italian universities (13,357 people), using their institutional email address. Moreover, university professors and researchers are usually easily reachable by e-mail, due to the work they do and for which they tend to access their e-mail address on a daily basis, also as a result of the

increase in working from home due to the Covid-19 health emergency (Favale et al. 2020). In order to obtain a sample that is as representative as possible in terms of gender, macro-sector, and geographical area of the reference population, the use of the self-administered questionnaire represents the most cost-effective solution in order to ensure a good geographical coverage, since the reference population is distributed throughout the country, but also to help reduce the effect of self-selection bias or social desirability bias (Fig. 2).

Social desirability bias is the tendency to under-report socially undesirable attitudes and behaviours and to over-report more desirable attributes. Along with other factors, social

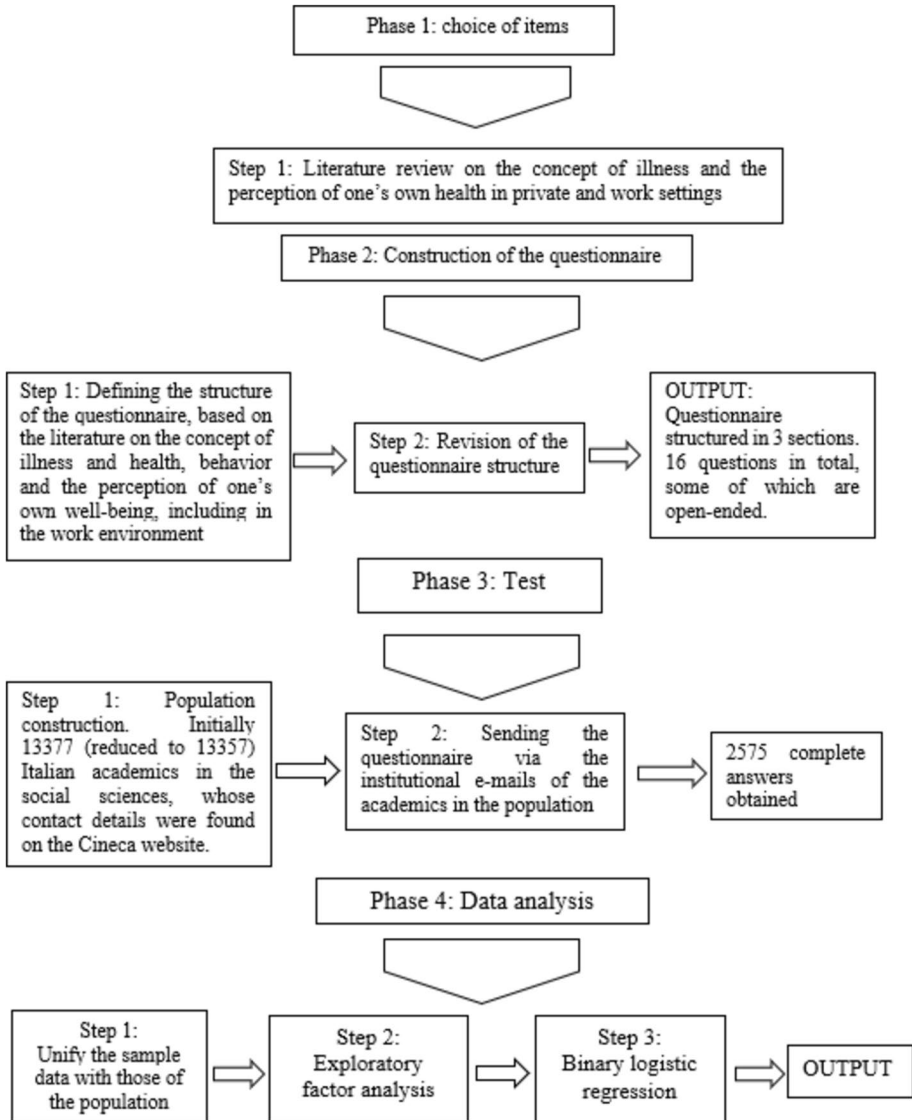


Fig. 2 Research stages

desirability bias is one of the biases that threaten the credibility of the validity of self-reported data. The bias is due to the willingness of the respondents to conform to the interviewer's normative expectations or to self-deception, which is based on motivation to maintain a positive self-concept that may be unconscious (Rickwood and Coleman-Rose 2023, 2). Social desirability bias has a greater impact on sensitive questions, particularly those related to mental health issues: the presence of an interviewer can have a significant—negative—impact: social desirability bias is more pronounced in face-to-face or telephone interviews than in self-administered online questionnaires (Tourangeau et al. 2000; Duffy, Smith, Terhanian, Bremer, 2005; Tourangeau Yan, 2007; Crutzen, Göritz 2011; McDermott Roen, 2012; D'Ancona 2014; Hoebel, von der Lippe, Lange, Ziese 2014; Burkill et al. 2016; Milton 2017; Zhang, Kuchinke, Woud, Velten, Margraf, 2017; Zager Kocjan, Lavtar, Sočan, 2023). As Klein (2020, 277) pointed out, «it is easier to admit an embarrassing truth (e.g., “I feel lonely”) in an anonymous online survey than to an actual person during a telephone or face-to-face interview».

The list of the academic community of interest includes full professors, associate professors and researchers in the social sciences, i.e. sociologists, political scientists, lawyers, pedagogists, statisticians, economists and psychologists and it can be easily downloaded from the website of the Italian Ministry of Universities and Research.

In total, 13,377 academics are mentioned, but since 20 people are missing from the institutional e-mail, as they may have abandoned their academic careers or retired, the population is reduced to 13,357, considering the subdivision proposed by *Cineca* in:

- Full professors,
- Associates,
- Researchers,
- t.def. researchers (art. 24 c.3-a L. 240/10),
- Fixed-term researchers—t.def. (art. 24 c.3-b L. 240/10),
- Temporary researchers (art. 24 c.3-a L. 240/10),
- Full time researchers (Art. 24 c.3-b L. 240/10),
- Unconfirmed researcher,
- Overtime,
- Extraordinary full-time researchers,
- Appointees.

To make the stratification more homogeneous, unconfirmed researchers and appointees were eliminated. At first it was also planned to eliminate overtime and fixed-term overtime but, since many are employees of telematic universities, it was decided to leave them and, if necessary, to study the stratification at a later date (Table 1).

The figure of the researcher, on the other hand, which is divided into many categories on the *Cineca* website, has been simplified into:

- Researcher,
- RtdA (i.e. junior fixed-term researchers),
- RtdB (i.e. senior fixed-term researchers).

Below is a brief overview of the frequencies of the variables obtained:

**Table 1** The sample, by sex, academic role and geographical area of the university of reference—valid answers

	Frequency	%
M	1368	53,1
F	1207	46,9
Total	2575	100,0
Full professor	783	30,4
Associate professor	1160	45,0
Permanent researcher	261	10,1
Rtd-a	122	4,7
Rtd-b	234	9,1
Other	15	0,6
Total	2575	100,0
North	1128	43,8
Centre	597	23,2
South, Isles and telematics	850	33,0
Total	2575	100,0

### 3.1 The questionnaire

The questionnaire has three main sections. The first one is inspired by the SF-36 questionnaire with 36 items defined to detect health status that include 8 concepts: (1) limitations in physical activities; (2) limitations in social activities; (3) limitations in habitual activities due to physical problems; (4) bodily pain; 5) general mental health (psychological stress and well-being); 6) limitations in habitual role activities due to emotional problems; 7) vitality (energy and fatigue); 8) general perceptions of one's health. The first section is focused on socio-demographic characteristics of the respondents Sex, Age; Academic Role; University of affiliation and geographical area of the university.

The second part of the questionnaire provides a more in-depth analysis to understand whether or not these problems affect work, relationships, etc. It is about the health condition, related to the physical health and emotional state.

Finally, the HSE Work-Related Stress Indicator Tool, to try to study the Covid-19 effect on people. This section is about Stress and work since the beginning of the pandemic, in which respondents had to evaluate limits in academic work, underlying their emotions and feelings experienced.

The questionnaire underlines four dimensions: it refers to the respondent's perception of health (illness), to obvious situations of diagnosed illness (disease), to how disease or illness can interfere on a relational level (sickness) and to the interaction between the human being, the illness and the external environment, such as home, work (ecological dimension), in addition to personal questions such as gender, year of birth, type of academic role, geographical area of your university and the macro-sector to which you belong.

### 3.2 Data analysis

The data analysis is divided into two phases:

- (1) Exploratory Factor Analysis (EFA): to explore the presence of latent factors between the second and third sections of the questionnaire, after finding correlation between variables;
- (2) Logistic Regression: to assess the relative risk on respondents' perception of health.

The sudden changes, due to the evaluation that entails more standardisation of teaching and is seen as an imposition, the strong demand for publication (increasingly marked by public or perish), whereby very often it does not matter how one publishes, but where and how much one publishes, have affected every aspect of the academic's work, creating situations of discomfort, anxiety, stress.

Data analysis was performed using SPSS software.

The research employed a web survey distributed to the entire target population of over 13,000 individuals. While the sample includes responses from 2,575 participants, it can be noted that the resulting dataset is a self-selected sample, which may introduce biases related to non-response. Initially, the sample was compared to the population data to evaluate its representativeness in terms of gender, academic role, and geographic distribution and the sample distributions closely align with the population data. For this reason, standardization was deemed unnecessary. However, it is important to acknowledge that the alignment of sample and population distributions does not eliminate potential biases inherent in non-probability sampling methods. Specifically, individuals more affected by the pandemic or more engaged in the topic may have been more likely to respond, potentially leading to an overrepresentation of certain perspectives. This limitation must be considered when interpreting the results.

After finding correlations between the variables of the second and third sections of the questionnaire, concerning health status, stress and work in times of pandemic, the first part of the analysis presents an exploratory type of factor analysis, to search for the presence of latent factors among the chosen variables. Exploratory factor analysis is used to identify the limitations, advantages or disadvantages perceived by Italian academics in the social sciences since the beginning of the pandemic, highlighting the exacerbation of existing situations or the appearance of new ones. Factors were extracted using the principal components method. The results show that correlations in the dataset exist and are appropriate for factor analysis and that the sampling for factor analysis and sampling adequacy are satisfactory (Table 2).

In addition, to simplify the factor structure and make the interpretation more reliable, a varimax rotation was performed. Once extraction and rotation have been carried out, it is important to select which factors, i.e. variables, are to be used. This has been done taking simultaneously into consideration three selection criteria (Pituch and Stevens 2016):

**Table 2** KMO and Bartlett test

Kaiser–Meyer–Olkin Measure of Sampling Adequacy		,893
Bartlett's Test of Sphericity	Approx. Chi-Square	20289081
	df	496
	sig	,000

- Kaiser criterion: on the basis of which it is necessary to retain all factors extracted which have an eigenvalue greater than one because smaller values relate to factors which can explain less than what a single variable can explain;
- Explained variance criterion: in this case the basis for the selection is the cumulative explained variance. A level of explained variance of 65%—70% is considered significant;
- *Scree test*: this method (Cattell 1966) aims to give a graphical representation of the factors to be taken into consideration. The graph shows the value of the eigenvalue on the vertical axis and the number of eigenvalues on the horizontal axis. The eigenvalues are plotted as points connected by a single line. According to the Cattell method, the choice of factors should be limited to the point where there is a levelling in the slope of the line.

The EFA results (see Appendix) suggest a seven-dimensional structure for factors related to one's perception of health during the pandemic period and the relationship to academic work. Although basically not many factors are needed if 70% of the variance is to be obtained, the decision to have retained all factors was determined by the fact that they have semantic significance.

To make the table clearer and allow for a better reading of the rotated components, the order in which the items are presented was redefined, putting the items with the highest component weights on the first factor at the top of the table, followed by the items with the highest component weights on the second factor, and so on up to the seventh (Table 3).

The components obtained are as follows:

1. the limitations in teaching and research: which correspond to the hours of teaching that take time away from research, writing too many articles, deadlines that are impossible to meet, pressure to work long hours, the inability and impossibility to separate private and working life which results in the ineffectiveness of research and teaching;
2. feelings of pandemic onset: interfered with social activities, with mixed feelings, including feeling calm and serene, full of energy, discouraged, sad, exhausted or worn out;
3. feeling languishing: leads to a depressed, hopeless, anxious state, with little concentration, of loneliness and failure;
4. pandemic onset limitations caused by physical health: leads to reduced working time, reduced performance, difficulties and limitations in work;
5. pandemic onset limitations due to emotional state: affected performance, work time and concentration;
6. perception of the physical and personal academic environment at one's workplace;
7. preference to work at home.

As suggested by Kaiser's criterion (Kaiser 1960) and the Scee test (Cattell 1966), it was decided at first not to eliminate any factors, to continue with the second stage of the analysis. To assess the role of independent variables in relation to the dependent variable, a logistic regression analysis was carried out. The dependent variable represents the perception of one's health, coded as a binary outcome (1 = poor health, 0 = good health). The model estimates the logarithm of the odds ratio for perceiving oneself to be in good health (probability of good health divided by the probability of poor health).

Specifically, the dependent variable is defined as:

**Table 3** Redefinition of the matrix of rotated components

	Components						
	1	2	3	4	5	6	7
How many times you have been thinking "I have these deadlines that I could not keep?"	,782						
How many times you have thought you have neglected some tasks because you have too much to do?	,716						
How many times it happened to you to receive pressure to work many hours?	,654						
How many times it has happened to you not been able to combine research and teaching engagements?	,644						
How many times it happened to you to think I must write too many articles?	,633						
How many times you have thought you could not separate between private life and work?	,582						
How many times it has happened to you to think "Hours of teaching take time to research?"	,484						
How many times have you thought "I have voice in chapter about the rhythms and modes of my work"?	,483						
How long have you been heated since the beginning of the pandemic has you been heated and silent?		,754					
How long has the pandemic been from the beginning of the pandemic have you felt full of energy?		,739					
How long have you been happy since the pandemic started?		,631					
Since the beginning of the pandemic in which measure your physical health or your emotional state have interfered with normal social activities?		,582					
How long have you been feeling discouraged and sad?		,558					
How long have you been anxious since the beginning of the pandemic?		,507					
For how long from the beginning of the pandemic have you felt exhausted?		,460					
How long have you experienced lack of concentration since the beginning of the pandemic?		,419					
How long have you been involved in doing things since the pandemic began?		,318					
Compared to the beginning of the pandemic how you would now judge your health in general?		,296					
How long have you felt hopeless since the beginning of the pandemic?						,767	
How long since the pandemic started have you felt failed?						,748	
How long have you felt depressed since the beginning of the pandemic?						,693	
How long since the beginning of the pandemic did you feel alone?						,512	
Since the beginning of the pandemic because of your physical health you have found limitation of some types of work?							,720

**Table 3** (continued)

	Components						
	1	2	3	4	5	6	7
Since the beginning of the pandemic because of your physical health you have reported a decrease in time from work?				,644			
Since the beginning of the pandemic because of your physical health you have found difficulties in doing work?				,618			
Since the beginning of the pandemic because of your physical health you have found lower achievement than you would have wanted?				,616			
Since the beginning of the pandemic because of your emotional state you have found lower learning than you would have wanted?					,766		
Since the beginning of the pandemic because of your emotional state you have found a drop of concentration at work?					,762		
Since the beginning of the pandemic because of your emotional status you have found Reduction of time dedicated to work?					,556		
How many times you have thought if I have difficulties at work my colleagues help me?						,742	
How many times have you thought that the physical environment in which you work is acceptable and adequate for the tasks you have to perform?						,665	
How many times you have been thinking about working from home?							,803

Extraction method: Principal component analysis

Rotation method: Varimax with Kaiser normalisation

a. Convergence for rotation performed in 8 iterations

$$\log -\text{odds of poor health} = \log \left( \frac{P(\text{poor health})}{1 - p(\text{poor health})} \right)$$

where  $P(\text{poorhealth})$  is the probability of reporting good health.

The regression coefficients ( $\beta$ ) indicate the change in the log-odds of perceiving good health for a one-unit increase in the independent variable. The  $\text{Exp}(B)$  values, or odds ratios, provide an interpretation of the multiplicative effect of the independent variables on the odds of perceiving poor health. For instance, an  $\text{Exp}(B) > 1$  indicates an increased likelihood of reporting poor health, while an  $\text{Exp}(B) < 1$  indicates a decreased likelihood.

The final analysis was performed according to Table 4:

Therefore, after performing the exploratory factor analysis and finding the latent variables, binary logistic regression was performed with the previous operationalisation of the variables. The control variables, being categorical, were coded as follows (Table 5):

Below is the binary logistic regression (Table 6):

Some variables, including Macrosector, Limits from pandemic onset due to emotional state, Work-at-home preference, are not significant and were removed from the model. To facilitate the interpretation, Table 7 presents both the  $\beta$ -coefficients and the corresponding odds ratios ( $\text{Exp}(B)$ ). For instance, a coefficient of 0.5 would correspond to an odds ratio

**Table 4** Definition and operationalisation of dependent, independent and control variables

<i>Dependent Variables</i>	<i>Operationalisation</i>
Perception of one's own health	1 = poor health 0 = good health
<i>Independent Variables</i>	<i>Operationalisation</i>
Limits of teaching and research	The independent variables were operationalised as factor scores related to the factors extracted through exploratory factor analysis (EFA)
Early pandemic feelings	
Depression hopeless failure	
Physical health limits	
Limits emotional state	
Academic environment	
Work from home	
<i>Control Variables (sociodemographic)</i>	<i>Operationalisation</i>
Sex	1 = M; 0 = F
Age	1 = 25–35 2 = 36–45 3 = 46–55 4 = 56–65 5 = > 66
Academic role	Dummy variables: 0 = precarious (RtdA, RtdB, Other) 1 = non-precarious (full, associate, permanent researcher)
Macrosector	1 = 11 (historical, philosophical, pedagogical, psychological sciences) 2 = 12 (legal sciences) 3 = 13 (economics and statistics) 4 = 14 (political and social sciences)
Geographical areas of universities	1 = North 2 = Centre 3 = South and Islands, telematics

**Table 5** Coding of categorical variables

		Frequency	Parameter encoding			
			(1)	(2)	(3)	(4)
Age group	25–35	65	1,000	,000	,000	,000
	36–45	574	,000	1,000	,000	,000
	46–55	1030	,000	,000	1,000	,000
	56–65	730	,000	,000	,000	1,000
	> 66	175	,000	,000	,000	,000
Macrosector areas	11	492	1,000	,000	,000	
	12	811	,000	1,000	,000	
	13	908	,000	,000	1,000	
	14	363	,000	,000	,000	
Geographical area universities	North	1128	1,000	,000		
	Centre	597	,000	1,000		
	Sud, Isles e telematics	849	,000	,000		
Sex	F	1207	1,000			
	M	1367	,000			
Precarious and non-precarius	Precarious (Rtda, Rtdb, other)	370	1,000			
	Non-precarius (full professors, associates, permanent researchers)	2204	,000			

of approximately 1.65, indicating a 65% increase in the odds of reporting poor health for a one-unit increase in the predictor variable.

Although a priori it was thought that insecurity was a relevant variable on the study of the perception of one's own health, according to the results presented, the academic role seems to have no significance in relation to the perception of health since the beginning of the pandemic, probably because fear has affected everyone regardless of the role covered (Marroquín et al. 2020). With regard to gender, female respondents in the survey have a high risk of negative health, as they have borne more of the burden of both professional and personal responsibilities, mainly related to having children at home during the entire period (Buckle 2020; Kowal et al. 2020; Minello 2020; Minello, Martucci, Manzo 2021). The relative risk is also high according to seniority, as the older the age, the greater the fear. Geographically speaking, especially in northern Italy, which is, moreover, the geographical area most affected by the emergency from the outset, the risk continues to be very high.

The factor “Limits from the beginning of the pandemic cause physical health” stands out as the most significant predictor of poor health perception. With a positive  $\beta$ -coefficient and an  $\text{Exp}(B)$  greater than 1, this factor significantly increases the likelihood of perceiving oneself in poor health. This finding underscores the critical role of physical limitations experienced during the pandemic in shaping individuals' self-perceived health status.

Conversely, the factors “Teaching and research limits”, “Feelings felt at the start of the pandemic”, and “Languishing” display negative  $\beta$ -coefficients, indicating that an increase in these variables reduces the likelihood of perceiving oneself in poor health. While this result may seem counterintuitive, it could reflect a complex interaction where these factors either serve as proxies for resilience mechanisms or are mitigated by

**Table 6** Logistic regression

Variables in the equation

Phase I	Precarious (Rtda, Rtdb, other)	B	S.E	Wald	gl	Sign	Exp(B)
Sex	F	,168	,090	3,497	1	,061	1,183
Age	25–35			73,011	4	,000	
	36–45	–1,498	,355	17,803	1	,000	,223
	46–55	–1,378	,201	46,838	1	,000	,252
	56–65	–834	,176	22,379	1	,000	,434
	>66	–338	,178	3,598	1	,058	,713
Geographical Area	Universities			4,633	2	,099	
	Center	–,211	,100	4,480	1	,034	,810
	Sud, Isles e telematics	–,160	,117	1,848	1	,174	,853
Macrosector Area	11			1,015	3	,798	
	12	,065	,152	,181	1	,670	1,067
	13	,104	,139	,555	1	,456	1,109
	14	,007	,136	,002	1	,960	1,007
Teaching and research limits		–,110	,045	5,834	1	,016	,896
Feelings felt at the start of the pandemic		–,572	,046	156,390	1	,000	,564
Langushing		–,229	,043	28,457	1	,000	,795
Limits from the beginning of the pandemic cause physical health		,154	,042	13,391	1	,000	1,166
Limits from the beginning of the pandemic due to emotional state		,042	,042	,972	1	,324	1,043
Academic environment		–,074	,043	2,894	1	,089	,929
Preference to work at home		–,043	,044	,989	1	,320	,958
Constant		,232	,200	1,342	1	,247	1,261

a. Variables included in phase I: precarious and non-precarious workers, sex, age in groups, university area, macrosector area, teaching and research limits, feelings experienced at the beginning of the pandemic, languishing, limits at the beginning of the pandemic due to physical health, limits at the beginning of the pandemic due to emotional state, academic environment, preference to work at home

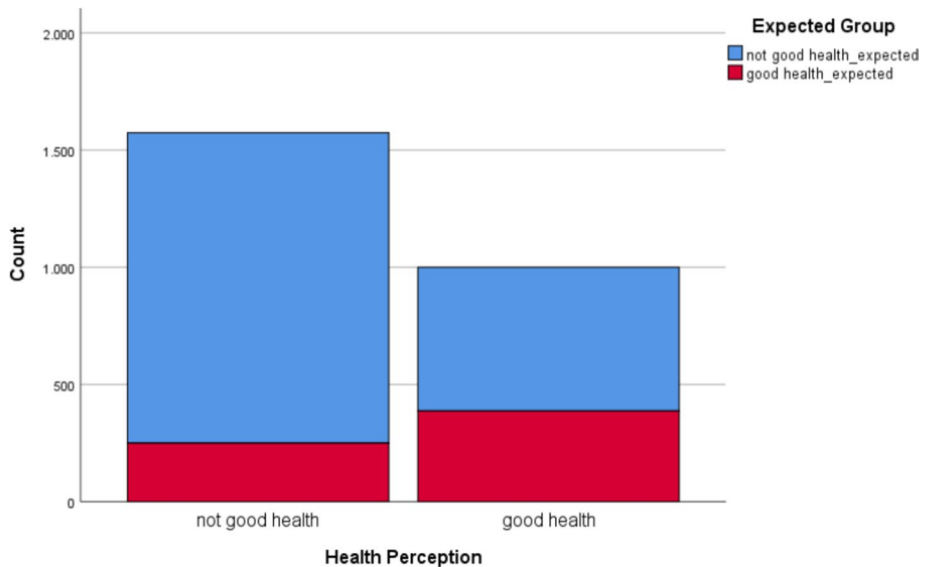
**Table 7** Logistic regression with elimination of non-significant variables

Variables in the equation		B	S.E	Wald	g	Sign	Exp(B)	95% C.I. EXP(B)	
								Lower	Upper
Phase I	Precarious (Rtda, Rtdb, other)	,263	,151	3,023	1	,082	1,301	,967	1,750
Sex	F	,177	,089	3,957	1	,047	1,193	1,003	1,420
Age	25–35			72,120	4	,000			
	36–45	-1,453	,352	17,050	1	,000	,234	,117	,466
	46–55	-1,369	,200	46,720	1	,000	,254	,172	,377
	56–65	-,827	,175	22,268	1	,000	,437	,310	,616
	> 66	-,339	,177	3,662	1	,056	,712	,503	1,008
Geographical area universities	North			4,907	2	,086			
	Center	-,215	,099	4,698	1	,030	,806	,664	,980
	Sud, Isles e Telematics	-,169	,117	2,073	1	,150	,845	,672	1,063
Teaching and research limits		-,105	,045	5,503	1	,019	,900	,824	,983
Feelings felt at the start of the pandemic		-,572	,046	157,427	1	,000	,564	,516	,617
Languishing		-,228	,043	28,154	1	,000	,796	,732	,866
Limits from the beginning of the pandemic cause physical health		,155	,042	13,530	1	,000	1,167	1,075	1,267
Academic environment		-,076	,043	3,109	1	,078	,926	,851	1,009
Constant		,275	,177	2,403	1	,121	1,316		

a. Variables included in phase I: precarious and non-precarious workers, sex, age in bands, university area, teaching and research limits, languishing, physical health-related pandemic onset limits, academic environment

**Table 8** Expected group of the model – valid cases

	Frequency	%
Not good health	1937	75,2
Good health	637	24,7
Total	2574	100,0

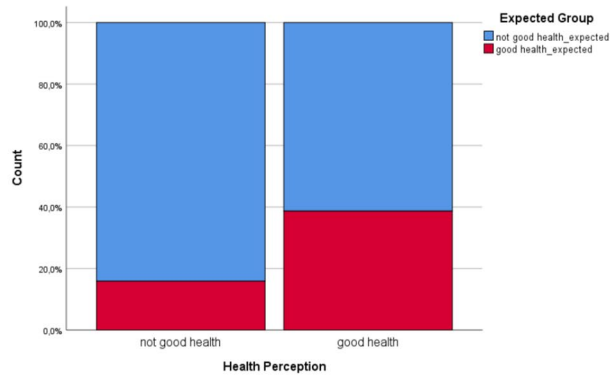
**Fig. 3** Planned group graph according to model

coping strategies that buffer their negative effects. The factor “Academic environment”, however, does not appear statistically significant, suggesting that conditions within the academic workplace have no direct influence on the perception of health in this model. Additionally, geographic and sociodemographic variables, such as academic role and location, show no substantial impact on health perception. This indicates that the pandemic’s effects on self-reported health were widespread, transcending professional and regional boundaries.

The use of Exp (B) facilitates interpretation, as it quantifies the effect of each variable on the odds of perceiving oneself in poor health. For instance, an Exp(B) of 1.5 corresponds to a 50% increase in the odds of reporting poor health for each unit increase in the predictor variable. The planned group is structured as follows (Table 8):

To make the results clearer and since logistic regression allows the predictability of an event to be studied, the following figure graphically highlights the matrix above:

The bar graph is the equivalent of the classification matrix shown above. The column on the left represents the people who are considered to be not in good health (more than 1,500) and the part in blue defines the same people according to the model, while the part in red (less than 500) are the errors in the model. The same interpretation applies to the right-hand column: the people in good health are about a thousand and of these, the correct classifications are those in red, while the model errors are in blue (Fig. 3).



### 1.1.

Fig. 4 Expected group graph with 100% scale

Table 9 Perception of working conditions in the future

	Frequency	%
Better	1741	67,6
Worse	834	32,4
Total	2575	100,0

In order to make the two columns homogeneous and to understand whether the model predicts good or bad health better, it is sufficient to make the scale 100%, so that we no longer have absolute values but percentages (Fig. 4). The model is strongest when classifying people who they consider to be in poor health, as the blue part is more than 80%, while the red part of the second column is below 40%.

### 3.3 Analysis of open-ended questions

There were some open-ended questions in the questionnaire which were very useful for the purposes of the project. In these cases, the respondent is asked to give his or her own answer to the question, so open-ended responses need to be coded before they can be processed for computer analysis. Given the large number of long responses, we decided to analyse them using thematic analysis before final coding.

Although Table 8 highlights critical situations, as most of the respondents seem to be in very poor health, hope for improvement seems to prevail, as can be seen in Table 9, which shows the answers to the question on how everyone sees their future working in academia in the next five years:

Although in the closed-ended question some people answered “Better”, in the subsequent open-ended question, which asked for an argument for their answer, around 50 stated that their hope is that the situation will improve, even if they think it will remain the same. Figure 5 shows the Word Cloud generated by the codes which appear most frequently in the answers:

**Fig. 5** Codes on why working conditions could be better in the next five years



Strong is the hope to overcome the criticality, malaise and obstacles that the pandemic has caused; the desire to improve oneself in order to grow personally and professionally, aimed at a return to normality, often justified as “innate optimism”, but also improving research, due to the modernisation of the university, new technologies allowing more work and time management options.

Significant is not only the career advancement that leads to personal growth, but also the raising of children, which allows for greater concentration in work and autonomy. The funds, the new resources are a strong incentive to work to the best of our ability and to see the academic future brighter with the start of new research and the end of started projects. While for some, technologies allow for better time management, for others, the return to presence is a key point for improving their working conditions. “Oppressive technologies” mean that there is no longer room for private life, that relationships between colleagues are fictitious.

In addition to being extremely “hard to imagine a situation worse than the pandemic”, the reasons why working conditions in academia seem to be improvable derive from imminent retirement and/or the abandonment of institutional, bureaucratic and administrative positions that wear out academics by preventing them from fulfilling the role for which they were actually hired. It is interesting to note the desire to return to conducting research in the field, to establish relationships no longer virtual but in presence, to abandon everything that constrains the “real job of the academic”, giving due weight to situations and requests.

What has been expressed does, however, make one reflect on the problems present in the university and the role of the academic. To date, researchers and professors are forced to do work that is not inherent to their role, there are no facilities for newcomers, who find themselves working for older colleagues. Moreover, to date, and the pandemic has shown this, research funds have been few and poorly distributed among the disciplines.

The issue of children is also very interesting: only women highlighted the problems of being a mother and working in academia. These problems become even more apparent in the question in the following questionnaire, i.e. the reason for answering “Worse” for working conditions in academia in the next five years (Fig. 6).

The critical issues that emerged are manifold, some of them in contrast to the above. It is clear that the time devoted to work needs to be scaled down, too much teaching and research do not allow for level-headed writing. The university is now a company, where only business and the market are thought of, where there are “neo-liberal economic imperatives”. Privatisation leads to a worsening of the work of academics, who no longer appear

**Fig. 6** Codes on why working conditions could be worse in the next five years



to be researchers, but rather machines, hence the deterioration of relations with colleagues, which gradually change for the worse and lead to “human relations with poor people”.

Forced distance has led to an ever more insistent desire for individualism, a race towards performance, meeting “business and money-hungry colleagues”, which leads to the victory of quantity over quality. The ever-increasing workload is a burden, a chase towards unattainable perfection and constrained by the obligation to do work that is not within one’s competence, due to administrative and bureaucratic work that prevents good research and time for the creation of sound teaching.

The discouragement is clear, also in relation to the quantitative data analysis, the perception of one’s health and state of well-being is getting worse and worse. Too much work is accompanied by few prospects for growth, in a world where those who advance are not through merit but through knowledge and baronage. Precariousness seems to be the watchword in the university world, where “lecturers are just numbers” and even worse is the situation for those who are women and even more so mothers. The most perceived and expressed moods are in fact anxiety, stress, despondency, the pressure of “having to do well” and fear of the future with grey prospects.

The reality of Italian academics in the social sciences therefore seems to have been severely affected by the pandemic, who first claim to be in poor mental health, malaise and languishing, but at the same time the hope that the situation will improve in the years to come is very much present.

## 4 Discussion and conclusions

Individual well-being is influenced by a wide range of factors, including health, which is inherently multidimensional. Its determinants are diverse and include objective elements such as biological factors, as well as subjective perceptions shaped by social, economic and political contexts. The COVID-19 pandemic was a sudden, disruptive global crisis that profoundly altered daily life, forcing individuals to focus on the present while abandoning plans for the future. This study highlights the complexity of health and well-being, emphasising the need to consider both its multidimensionality and the wide range of indicators needed to assess it effectively.

Social determinants of health such as age, gender, lifestyle, education, work environment and social networks interact in complex ways to influence well-being. Yet concepts such as disorder, discomfort and pathology are often mistakenly treated as synonymous, overshadowing the nuanced opportunities and individual capabilities that can foster resilience and adaptation. *Normality*, too, is contextual, varies across

cultures and historical periods, and must be understood as a dynamic construct shaped by external demands.

This study focuses on Italian academics in the social sciences, a population under-researched in mental health research, despite their increasing struggles, exacerbated by the pandemic. Depression, stress, anxiety, burnout and insecurity have emerged as significant problems within this group, revealing deep-seated challenges within academia that the pandemic has only exacerbated (Marroquín et al. 2020; Johnson and Lester 2021). Despite these difficulties, a strong sense of hope persists, reflecting the potential for resilience and positive change. The findings highlight the need for institutional policies tailored to the specific challenges faced by academics. Workload adjustments, flexible working arrangements and accessible mental health support programmes could significantly improve their wellbeing (Keyes 2002; Henderson et al. 2016; Fassari and Lo Presti 2017; Sørensen and Traweek 2022). These measures are particularly important during a period of crisis, but are also valuable in addressing systemic issues within academia.

The findings reveal significant associations between job demands – such as teaching and research responsibilities – and mental health outcomes, particularly during the pandemic. These associations highlight areas where interventions to alleviate physical and emotional stress are urgently needed. However, the cross-sectional design of the study limits the ability to infer causality, highlighting the need for longitudinal research to better understand these dynamics. Future studies could investigate how changes in workload, institutional support and individual coping strategies affect mental health over time. Experimental approaches could also validate these findings by isolating the effects of targeted interventions.

This research is an important step in understanding and addressing the mental health challenges faced by academics. It calls for further research and evidence-based strategies to create healthier, more supportive academic environments that ensure the sustainability and resilience of both individuals and institutions.

## Appendix

See Table 10

**Table 10** Matrix of rotated components

	Component						
	1	2	3	4	5	6	7
Compared to the beginning of the pandemic how you would now judge your health in general	,094	,296	,112	,058	-,054	,157	-,157
Since the beginning of the pandemic in which measure your physical health or your emotional state have interfered with normal social activities	,105	,582	,198	-,082	-,011	-,019	,038
How long have you been heated since the beginning of the pandemic has you been heated and silent?	,115	,754	,189	-,020	-,009	,030	,008
How long has the pandemic been from the beginning of the pandemic have you felt full of energy?	,090	,739	,069	-,053	-,052	,067	-,017
How long have you been feeling discouraged and sad?	,117	,558	,448	,033	-,016	-,047	-,026
For how long from the beginning of the pandemic have you felt exhausted?	,355	,460	,327	,033	-,012	-,047	-,076
How long have you been happy since the pandemic started?	-,033	,631	,112	-,064	,021	,215	,106
How long have you been involved in doing things since the pandemic began?	,134	,318	,434	,009	-,025	,070	,009
How long have you felt depressed since the beginning of the pandemic?	,105	,380	,693	-,040	,040	,018	,022
How long have you felt hopeless since the beginning of the pandemic?	,083	,177	,767	-,030	-,008	,037	,041
How long have you been anxious since the beginning of the pandemic?	,167	,507	,420	,014	-,015	-,051	,028
How long since the pandemic started have you felt Failed?	,116	,090	,748	-,023	-,008	,063	-,018
How long have you experienced lack of concentration since the beginning of the pandemic?	,303	,419	,372	-,073	-,031	-,018	-,069
How long since the beginning of the pandemic did you feel alone	,063	,319	,512	-,042	-,002	,110	-,002
Since the beginning of the pandemic because of your physical health you have reported a decrease in time from work	-,034	,038	-,201	,644	,112	-,001	,025
Since the beginning of the pandemic because of your physical health you have found lower achievement than you would have wanted	-,003	-,059	,035	,616	,302	,042	,003
Since the beginning of the pandemic because of your physical health you have found limitation of some types of work	-,046	-,067	-,001	,720	-,079	-,035	-,025
Since the beginning of the pandemic because of your physical health you have found difficulties in doing work	-,044	-,049	,074	,618	,196	-,016	,010
Since the beginning of the pandemic because of your emotional status you have found Reduction of time dedicated to work	,004	,077	-,169	,267	,556	-,046	,027
Since the beginning of the pandemic because of your emotional state you have found lower learning than you would have wanted	-,013	-,090	,090	,179	,766	,004	,004

Table 10 (continued)

	Component						
	1	2	3	4	5	6	7
Since the beginning of the pandemic because of your emotional state you have found a drop of concentration at work	-,010	-,059	,025	,052	,762	-,016	,024
How many times it has happened to you to think Hours of teaching take time to research	,484	-,024	,142	,051	-,129	,033	,421
How many times it happened to you to think I must write too many articles	,633	,025	,116	-,071	-,001	,047	,154
How many times you have been thinking I have these deadlines that you could not keep	,782	,087	,082	-,056	,012	,034	-,045
How many times you have thought if I have difficulties at work my colleagues help me	-,039	,060	,033	-,033	,016	,742	,166
How many times have you thought "I have voice in chapter about the rhythms and modes of my work"	,483	,143	,055	-,008	-,026	,457	-,290
How many times you have thought you have neglected some tasks because you have too much to do	,716	,140	,074	-,007	,022	-,069	-,003
How many times it happened to you to receive pressure to work many hours	,654	,060	,015	-,064	,056	,121	-,124
How many times you have thought you could not separate between private life and work	,582	,220	,091	-,002	,005	,038	,085
How many times you have been thinking about working from home	,139	,032	-,022	,003	,084	,081	,803
How many times it has happened to you not been able to combine research and teaching engagements	,644	,104	,135	,022	-,090	,081	,191
How many times have you thought that the physical environment in which you work is acceptable and adequate for the tasks you have to perform	,185	,092	,089	,011	-,051	,665	-,027

Extraction method: Principal component analysis

Rotation method: Varimax with Kaiser normalisation

a. Convergence for rotation performed in 8 iterations

**Author contribution** Lucia Di Stefano and Paolo Parra Saiani contributed to the study conception and design. Material preparation, data collection and analysis were performed by Lucia Di Stefano and Enrico Ivaldi. The first draft of the manuscript was written by Lucia Di Stefano and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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## Declarations

**Conflict of interest** The authors have no relevant financial or non-financial interests to disclose.

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## References

- Buckle, C.: Research during the COVID-19 pandemic: Ethics, gender and precarious work. *Int. J. Hous. Policy* (2020). <https://doi.org/10.1080/19491247.2020.1857907>
- Burkill, S., Copas, A., Couper, M.P., Clifton, S., Prah, P., Datta, J., et al.: Using the web to collect data on sensitive behaviours: a study looking at mode effects on the british national survey of sexual attitudes and lifestyles. *PLoS ONE* **11**(2), e0147983 (2016). <https://doi.org/10.1371/journal.pone.0147983>
- Busetta, G., Campolo, M.G., Panarello, D.: Economic expectations and anxiety during the COVID-19 pandemic: a one-year longitudinal evaluation on Italian university students. *Qual. Quant.* **57**, 59–76 (2023). <https://doi.org/10.1007/s11135-022-01330-y>
- Busetta, G., Campolo, M.G., Panarello, D.: Changes in daily life habits during COVID-19 and their transitory and permanent effects on italian university students' anxiety level. *Appl. Res. Qual. Life* (2024). <https://doi.org/10.1007/s11482-024-10304-1>
- Cattell, R.B.: The scree test for the number of factors. *Multivar. Behav. Res.* **1**, 245–276 (1966)
- Cellini, M., Antonucci, M.C., Avveduto, S., Crescimbeni, C., Di Tullio, I., Luzi, D., Pisacane, L., Pecoraro, F., Ruggieri, R.: COVID-19: smart working e questioni di genere negli enti di ricerca italiani. In: Avveduto, S. (eds.) *Il Mondo Nuovo: La ricerca nell'anno della pandemia. Rapporto GETA 2020*. Cnr Edizioni, Roma (2021).
- Corey, L.M.K.: The mental health continuum: from languishing to flourishing in life. *J. Health Soc. Behav.* (2002). <https://doi.org/10.2307/3090197>
- Crutzen, R., Göritz, A.S.: Does social desirability compromise self-reports of physical activity in web-based research? *Int. J. Behav. Nutr. Phys. Act.* **8**(31), 1–4 (2011). <https://doi.org/10.1186/1479-5868-8-31>
- D'Ancona, M.A.C.: Measuring xenophobia: social desirability and survey mode effects. *Migration Stud.* **2**(2), 255–280 (2014)
- Duffy, B., Smith, K., Terhanian, G., Bremer, J.: Comparing data from online and face-to-face surveys. *Int. J. Mark. Res.* **47**(6), 615–639 (2005). <https://doi.org/10.1177/147078530504700602>
- Fassari, L.G., Lo Presti, V.: La mela bacata. Per una riflessività culturale sulla professione accademica. *Scuola Democ* **8**, 367–386 (2017)
- Favale, T., Soro, F., Trevisan, M., Drago, I., Mellia, M.: Campus traffic and e-Learning during COVID-19 pandemic. *Comput. Netw.* (2020). <https://doi.org/10.1016/j.comnet.2020.107290>
- Giarelli, G.: *Sofferenza e condizione umana. Per una sociologia del negativo nella società globalizzata*. Rubbettino Editore, Soveria Mannelli (2018).
- Grant, A.: *Think Again. The Power of Knowing What You Don't Know*. Ebury Publishing, London (2021)
- Han, B.-C.: *La società della stanchezza*. Nottetempo, Roma (2012).

- Henderson, L., Honan, E., Loch, S.: The Production of Academicwritingmachine. *Reconceptualizing Research Educational Methodology* 7, 4–18 (2016)
- Hoebel, J., von der Lippe, E., Lange, C., Ziese, T.: Mode differences in a mixed-mode health interview survey among adults. *Arch Public Health*. **72**(1), 46 (2014). <https://doi.org/10.1186/2049-3258-72-46>
- Johnson, A.P., Lester, R.J.: Mental health in academia: Hacks for cultivating and sustaining wellbeing. *Am. J. Hum. Biol.* (2021). <https://doi.org/10.1002/ajhb.23664>
- Kaiser, H.F.: The application of electronic computers to factor analysis. *Educ. Psychol. Measur.* **20**, 141–151 (1960)
- Klein, J.W., Tyler-Parker, G., Bastian, B.: Measuring psychological distress among Australians using an online survey. *Aust. J. Psychol.* **72**(3), 276–282 (2020). <https://doi.org/10.1111/ajpy.12283>
- Kowal, M.T.C.-M., Ikizer, G., Rasmussen, J., Eichel, K., Studzińska, A., Koszałkowska, K., Karwowski, M., Najmussaqqib, A., Pankowski, D., Lieberoth, A., Ahmed, O.: Who is the most stressed during the COVID-19 pandemic? Data from 26 countries and areas. *Appl. Psychol. Health Well Being* **12**, 946–966 (2020)
- Leathwood, C., Read, B.: Research policy and academic performativity: compliance, contestation and complicity. *Stud. High. Educ.* (2013). <https://doi.org/10.1080/03075079.2013.833025>
- Marelli, S., Castelnovo, A., Somma, A., Castronovo, V., Mombelli, S., Bottoni, D., Leitner, C., Fossati, A., Ferini-Strambi, L.: Impact of COVID-19 lockdown on sleep quality in university students and administration staff. *J. Neurol.* **268**(1), 8–15 (2021). <https://doi.org/10.1007/s00415-020-10056-6>
- Marroquín, B., Vine, V., Morgan, R.: Mental health during the COVID-19 pandemic: effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatry Res.* **293**, 1–9 (2020)
- McDermott, E., Roen, K.: Youth on the virtual edge: Researching marginalized sexualities and genders online. *Qual. Health Res.* **22**(4), 560–570 (2012). <https://doi.org/10.1177/1049732311425052>
- Mekonnen, G.T., Beyera, G.K., Tulu, A., et al.: Perceived influence of COVID-19 pandemic on university students' learning and mental health in Ethiopia. *Qual. Quant.* **57**, 2545–2562 (2023). <https://doi.org/10.1007/s11135-022-01485-8>
- Milton, A.C., Ellis, L.A., Davenport, T.A., Burns, J.M., Hickie, I.B.: Comparison of self-reported telephone interviewing and web-based survey responses: findings from the second Australian young and well national survey. *JMIR Mental Health* **4**(3), e37 (2017). <https://doi.org/10.2196/mental.8222>
- Minello, A.: The pandemic and the female academic. *Nature* (2020). <https://doi.org/10.1038/d41586-020-01135-9>
- Minello, A., Martucci, S., Manzo, L.K.: The pandemic and the academic mothers: present hardships and future perspectives. *Eur. Soc.* **23**(sup1), S82–S94 (2021)
- Quintiliani, L., Sisto, A., Vicinanza, F., Curcio, G., Tambone, V.: Resilience and psychological impact on Italian university students during COVID-19 pandemic distance learning and health. *Psychology Health & Med.* **27**(1), 69–80 (2022)
- Rickwood, D.J., Coleman-Rose, C.L.: The effect of survey administration mode on youth mental health measures: Social desirability bias and sensitive questions. *Heliyon* **9**(9), e20131 (2023). <https://doi.org/10.1016/j.heliyon.2023.e20131>
- Rosa, H.: *Alienation and Acceleration: Towards a Critical Theory of Late-Modern Temporality*, NSU Press (2010).
- Rostan, M., Vaira, M.: Una professione che sta cambiando. In Rostan, M. (ed.) *La professione accademica in Italia. Aspetti, problemi e confronti nel contesto europeo*. Led, Milano (2011).
- Sørensen, K.H., Traweek, S.: *Questing Excellence in Academia: A Tale of Two Universities*. Routledge, London (2022)
- Tontodimamma, A., del Gobbo, E., Corbo, M., et al.: How to improve academic well-being: an analysis of the leveraging factors based on the Italian case. *Qual. Quant.* (2024). <https://doi.org/10.1007/s11135-023-01700-0>
- Tourangeau, R., Yan, T.: Sensitive questions in surveys. *Psychol. Bull.* **133**, 859–883 (2007)
- Tourangeau, R., Rips, L., Rasinski, K.: *The Psychology of Survey Response*. Cambridge University Press, Cambridge (2000)
- Urbina-García, A.: What do we know about university academics' mental health? a systematic literature review. *Stress. Health* (2020). <https://doi.org/10.1002/smi.2956>
- Watermeyer, R., Olssen, M.: 'Excellence' and exclusion: the individual costs of institutional competitiveness. *Minerva* **54**, 201–218 (2016)
- Who: *Mental Health Action Plan 2013–2020* (2013).
- ZagerKocjan, G., Lavtar, D., Sočan, G.: The effects of survey mode on self-reported psychological functioning: Measurement invariance and latent mean comparison across face-to-face and web modes. *Behav. Res. Methods* **55**, 1226–1243 (2023). <https://doi.org/10.3758/s13428-022-01867-8>

Zhang, X., Kuchinke, L., Woud, M.L., Velten, J., Margraf, J.: Survey method matters: online/offline questionnaires and face to-face or telephone interviews differ. *Comput. Hum. Behav.* **71**, 172–180 (2017). <https://doi.org/10.1016/j.chb.2017.02.006>

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