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Health Psychology

Fear of COVID-19 mediates the relation between mental distress and at-risk health behaviours in Italian adults

Guido Veronese^{1*}, Federica Cavazzoni¹, Francesca Fiore¹, Rachel Pancake¹

Abstract

Background: The COVID-19 pandemic has become a global crisis, necessitating an investigation of its effects from a mental health and wellbeing perspective. In Italy within a few weeks of detecting the first case of coronavirus (February 20, 2020), the country imposed a nationwide quarantine to reduce transmission of the virus disrupting people's daily lives, and creating a significant impact on their physical and mental health.

Methods: We sought to test the mediating role of the fear of COVID-19 in the association between mental distress and risky health behaviours in a population of 592 Italian adults, including 467 females and 124 males (M= 39.7; SD= 16.4; range 18-79). First, we hypothesized a direct positive effect of mental distress, measured through the General Health Questionnaire (GHQ) on risky health behaviours, recorded throughout an adaptation of the Ebola risk behaviour scale, second, a direct and negative association between mental distress and fear of COVID-19 and the mediation role of Fear of COVID (FCV) between mental distress and risky health behaviours.

Results: Mental distress and risky behaviours showed to be tied thanks to the mediation of fear of the COVID-19. This relationship is an essential indicator of the role of decreased mental health in alleviating fear and exposing people to risky behaviours.

Conclusions: Good mental health could protect from risk-taking behaviours when fear is not intervening as a mediator, while psychologically distressed people could perceive less fear of getting infected and be exposed to harmful and dangerous behaviours that could increase the risk of contracting the COVID-19. Our findings might help in promoting healthy behaviours during the pandemic outbreak.

¹ "Riccardo Massa" Department of Human Sciences for Education, University Milano-Bicocca, Milano, Italy

E-mail corresponding author: guido.veronese@unimib.it



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1. Introduction

Since its first appearance in China, in December 2019, coronavirus disease-2019 (COVID-19) reached a pandemic level within a few months, profoundly affecting countries all around the world. To date (October 4, 2021), there have been over 234.8 million confirmed cases worldwide, with a death toll of over 4.8 million reported to the World Health Organization (WHO, 2021). The governments of affected countries implemented various restrictions in an attempt to prevent the spread of the virus, for example, social distancing, the mandatory wearing of protective gear, travel bans, and the closure of educational institutions, and non-essential commercial activities (Anderson et al., 2020; Wilder-Smith & Freedman, 2020). At the national level, many countries introduced blanket closures or lockdowns, limiting citizens' freedom to travel to other cities or regions, and forcing people to remain in their homes to reduce human casualties. In Italy, where this study took place, within a few weeks of detecting the first case of coronavirus (February 20, 2020), the country imposed a nationwide quarantine to reduce transmission of the virus (Fusar-Poli et al., 2020).

Due to the virus and related restrictive measures, people's daily lives had been completely disrupted, creating a significant impact on their physical and mental health (Garfin et al., 2020). In addition to high levels of distress over one's safety, the safety of one's family, and the socio-economic situation associated with business restrictions and many being unable to work, people also experienced a wide range of psychological stressors due to the arrival of pandemic (Harper et al., 2020; Pakpour & Griffiths, 2020; Taylor et al., 2020). From the beginning of the outbreak to today, the psychosocial consequences of the pandemic have become a serious global concern. Several studies have outlined the many consequences of COVID-19, such as loneliness, insomnia, anxiety, stress, anger, confusion, depression, panic attacks, irritability, and emotional exhaustion, up to and including actual posttraumatic stress reactions (Belen, 2020; Bo et al., 2020; Brooks et al., 2020; Dubey et al., 2020; Holmes et al., 2020; Islam et al., 2020; Liu et al., 2020; Satici et al., 2020; Xin et al., 2020). Additionally, the feelings of powerlessness and the lack of control over the virus led a large portion of the world's population to experience extreme feelings of vulnerability and fear of being infected or infecting loved ones (Liao et al., 2019; Rajkumar, 2020). For instance, there are several reported cases of people committing suicide due to fear of being infected (Goyal et al., 2020; Mamun & Griffiths, 2020); however, autopsies found no trace of the virus, highlighting the importance of exploring the relationship between fear and behaviours activated by people to protect themselves (Huarcaya-Victoria et al., 2020; Rajkumar, 2020).

1.1 Fear of COVID-19, mental health and risky behaviours

Defined in the literature as an unpleasant emotional state triggered by perceived threatening stimuli (de Hoog et al., 2008), fear of COVID-19 has severely affected mental well-being worldwide (Mahmud et al., 2020; Simsir et al., 2021). Also referred to as *coronaphobia* (Asmundson & Taylor, 2020), recent studies have highlighted how the fear of the virus can exacerbate existing mental health complications or elicit extreme anxiety and stress reactions (Bakioğlu et al., 2020; Colizzi et al., 2020; Harper et al., 2020; Satici et al., 2020a, 2020b; Sun et al., 2020). Furthermore, higher levels of fear have been delineated as leading to dark and irrational thoughts (Ahorsu et al., 2020) and as detonators of intense feelings of anxiety and depression or disproportionate feelings of guilt (Belen, 2020; Lin et al., 2020; Fitzpatrick et al., 2020). On the other hand, fear can also play a central role in encouraging a range of behaviours that decrease risky actions and promote protective ones (Harper et al., 2020; Li et al., 2020). Steimer (2002, p. 45) had defined fear as "a motivational state aroused by specific stimuli that give rise to defensive behaviour or escape", thus highlighting its role as a motivator of potential actions aimed at counteracting fear and mitigating threat (Shultz et al., 2016).

Accordingly, fear has been defined as a state of mind that enters an individual's consciousness whenever they feel in danger, recognizable by inner feelings, or behavioural manifestations such as freezing in place, fleeing the situation, trembling or fearful facial expressions (LeDoux, 2014). Advancements in neurosciences examined fear as a mediator between threatening experiences and defensive responses, hypothetically, making it a physiological and motivational state associating perceived dangers with behaviour (Miller, 1948). Thus, fear was defined as "a(n) [unconscious] physiological state of a neural circuit in the amygdala that mediates between threats and defense responses" (Adolphs, 2013; p. P79). On the other hand, more recent perspectives considered fear as a more conscious process situated in the amygdala or identifiable at cortical levels (Barret, 2017; LeDoux, 2015). Overall, scholars have considered functional fear as a functional defensive and protective mechanism, versus dysfunctional (or pathological fear) that can elicit acute anxiety and unhelpful stress reactions (Debiec & Olson, 2017).

To better understand the association between mental health and the fear of COVID-19, as well as its influence on people's preventive or risky behaviours, Ahorsu and colleagues (2020) developed the Fear of COVID-19 Scale (FCV-19S), as a valid and reliable assessment instrument. Translated and validated in over 15 languages, including Italian (Soraci et al., 2020), this instrument has demonstrated excellent psychometric properties (Pakpour et al., 2020; Ransing et al., 2020). Reviewing the related literature shows how higher scores on the FCV-19S

are associated with lower mental wellbeing and life satisfaction levels and higher states of anxiety, stress, and depression (Garfin et al., 2020; Satıcı et al., 2020a, 2020b). Nevertheless, the literature remains to be investigated in regards to behavioral responses to COVID-19. On one hand, fear seems to be positively associated with preventive behaviours defending against the disease. The more the threat is perceived as serious and real, the more it seems to act as a motivational factor for people who engage more in preventive behaviours (Harper et al., 2020; Li et al., 2020; Yildirim et al., 2021). On the other hand, other studies highlight the more catastrophic aspects of fear, such as its ability to interfere with cognitive processes, and thus, the ability to think clearly (Ahorsu et al., 2020; Soraci et al., 2020a), prompting people to engage in greater risk-taking behaviours (Betancourt et al., 2016; Shultz et al., 2016).

Furthermore, some studies have shown a significant association between the quality of a person's mental health and their adherence to protective and preventive behaviours. For instance, literature has shown that HIV-positive people who suffer from depression, anxiety, or posttraumatic symptoms are more reluctant to adhere to HIV/AIDS-related treatments (Adejumo et al., 2016; Willie et al., 2016). Similarly, in a recent study on the impact of the Ebola outbreak in Sierra Leone, Betancourt and colleagues (2016) investigated the relationship between individuals' mental health and their engagement in risky or preventive behaviours concerning virus protection. The pattern that emerged from their study similarly showed that chronic mental health difficulties (e.g., higher levels of depression or PTSD) contributed to the development of greater risk-taking behaviours related to the epidemic (Betancourt et al., 2016). In other words, the presence of psychological impairments and poor mental health can distort the person's judgment of a genuinely dangerous situation, leading the person into higher risk-taking behaviours (Betancourt et al., 2016; Cavanaugh et al., 2010).

To our knowledge, little is known about the role of mental health in influencing the fear of COVID-19 and how this relationship could have led individuals to engage in unhealthy and dangerous behaviours that might increase the risk of infection.

1.2 The present study

In light of the panorama mentioned above, we aimed to investigate the relationship between people's mental health, fear of COVID-19, and engagement in risky, non-preventive health behaviours. At the time of the writing, the COVID-19 pandemic had become a global crisis, necessitating an investigation of its effects from a mental health and wellbeing perspective. Therefore, the present study aims to investigate the mediating role of fear of COVID-19 in the association between mental distress and risky health behaviours. We hypothesized a direct

positive effect of mental distress, measured through the GHQ questionnaire on risky health behaviours, recorded throughout the adaptation of the Ebola risk behaviour scale (CoV-RB) (H1). Then, a direct and negative association between mental distress and fear of COVID-19 (FCV-19) (H2) and the mediation role of FCV between mental distress and risky health behaviours (H3).

2. Methods

2.1 Participants

Data was collected through an online survey with a snowball sampling procedure. Thus, every participant was asked to refer to other possible contacts to ensure diversity in the sampling. The inclusion criteria were: being a resident in Italy, an Italian speaker, and over the age of 18. The final sample consisted of 592 individuals, including 467 (78.9%) females and 124 (20.9%) males, and their ages ranged from 19 to 79 years old ($M = 39.7$; $SD = 16.4$). Of the participants, 44 (7.4%) were secondary school graduates, 235 (39.7%) were high school graduates, 117 (19.8%) had a bachelor's degree, and 196 (32.8%) had a MA degree or a PhD. Moreover, 304 (51.4%) of the respondents were single/unmarried, 241 (40.7%) were married or cohabiting with their partner, whilst 39 (6.6%) were separated/divorced, and eight (1.4%) were widowed. Finally, 588 (99.3%) participants reported good health, while six participants claimed health problems.

2.2. Instruments and Procedures

The survey included a total of three self-reported questionnaires that covered a wide range of topics from mental health, risky behaviours related to COVID-19, and fear of COVID-19. Participants were fully informed about the research aims and were aware that they could refuse completion of the questionnaires or specific items at any time. A written informed consent was obtained from all participants. The questionnaires were anonymized, and participants' names were coded in order to ensure absolute privacy.

The research was conducted following the American Psychological Association (APA) ethical principles and code of conduct (APA, 2013) and approved by the Milano-Bicocca Institutional Review Board.

General Health Questionnaire. The General Health Questionnaire (GHQ) is a screening device to identify minor psychiatric disorders in the general population and within a community or non-psychiatric clinical settings such as primary care or general medical out-patients. Since its development by Goldberg in the 1970s, it has been used extensively in different settings and cultures (Goldberg & Blackwell, 1970). The questionnaire was initially developed as a 60-item

instrument, but many shortened versions are currently in use. In the present study, we administered the 12-item version (GHQ-12), which includes questions about the general level of happiness, the presence of depressive and anxiety symptoms, and sleep disturbance over the last four weeks. It was rated on a four-point Likert scale (0= Always; 1= As usual; 2= Less than usual; 3= Never), and Cronbach's alpha internal consistency coefficient of the GHQ was calculated as .85.

COVID-19 Risk Behaviors (COV-RB). To assess participants' risky behaviours concerning COVID-19, we adopted and adapted the self-report measures developed concerning the Ebola Virus Disease (EVD risk behaviours) (Betancourt et al., 2016). The risk behaviours (EVD – RB) were measured by 14 items assessing the likelihood of engaging in certain behaviours if a family member or oneself experienced COVID-like symptoms (0= very unlikely; 1= somewhat likely; 2= very likely). Such risk behaviours included conduct such as waiting to see if the symptoms would go away or trying treatments such as hot salt-water baths. For this study, Cronbach's alpha internal consistency coefficients for COV – RB were calculated as .83.

Fear of COVID-19 Scale (FCV-19). The participants' fear of the novel coronavirus was measured with the Fear of COVID-19 Scale (FCV-19; Ahorsu et al., 2020). The FCV-7 adopted version (Ahorsu et al., 2020) consists of 7 items (e.g., 'I am most afraid of COVID-19'; 'My heart races or palpitates when I think about getting COVID-19'), where ratings are given on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). In addition, Cronbach's alpha internal consistency coefficients for FCV were calculated at .84.

Internal consistency was calculated through alpha Cronbach; skewness and kurtosis were analyzed to test assumptions of normality. Table 1 summarizes the main descriptive statistics for all the variables included in the study, along with their internal consistency coefficients. All scales had acceptable internal consistency coefficients ($\alpha > .70$), and all variables were preliminarily checked by computing Mahalanobis distances ($p < .001$) to identify and clean outliers. There were no extreme multivariate values, and no variables presented multicollinearity. Finally, the data was assessed to verify whether the scores were normally distributed. None of the variables within the study displayed kurtosis or skewness values exceeding the recommended limits [-2, +2; George & Mallery, 2010].

Furthermore, we calculated zero-order correlations and descriptive statistics (means and standard deviations) to evaluate the potential direct association between participants' demographics (age and gender) and the study variables. We performed a moderated multiple regression analysis, a regression analysis with interactions, to explain the paths of relationships

between the variables considered in our study (Baron & Kenny, 1986). Multiple regressions were conducted to control our conceptual model before full SEM analysis.

Finally, goodness-of-fit indexes of SEM were calculated to evaluate our final model (Kline, 2011). We assessed the model's fit with the observed data via the ratio of chi-square, its degrees of freedom (χ^2/df), normed fit index (NFI; Marsh et al., 2014), Tucker-Lewis Index (TLI; Marsh et al., 2014), comparative index (CFI; Bentler, 1990), and root mean square error of approximation (RMSEA; Browne & Cudeck, 1993). A χ^2/df of at least 5 (Marsh & Hocevar, 1985), CFI, TLI, and NFI scores equal or greater than 0.95 and a RSMA of under 0.08 (Browne & Cudeck, 1993) showed a good model-data fit. The statistics were conducted using Analysis of Moment Structures (AMOS-23) software (Arbuckle, 2014).

3. Results

3.1. Main descriptive statistics

Findings from preliminary analysis demonstrated no severe violations of data normality. Descriptive statistics including Cronbach's alpha, minimum, maximum, mean, standard deviation, skewness, and kurtosis values for the variables under study are presented in Table 1. Concerning participants' scores on the self-reported scales, the overall mental health was lower than the cut-offs indicated for GHQ (the mean for this sample is 15.10) and the values for the FCV and COV-RB (the mean for this sample is 4.17, 18.34 respectively) tests are higher than the scores reported on the tests cut-offs.

Table 1. Main descriptive statistics for quantitative measures

Measure	Mean	SD	Min	Max	Kurtosis	Skewness	α
GHQ-12	15.10	3.9	5.00	29.00	0.43	0.67	.85
COV-RB	18.34	5.8	5.00	26.00	0.43	0.77	.83
FCV	4.17	2.3	2.00	14.00	1.26	1.34	.84

Zero-order correlations among the study variables were computed and reported in Table 2. Results showed that fear of COVID-19 was positively correlated with engaging in risk-taking behaviours ($r=.235$, $p<.05$), while it was inversely correlated with the General Health Questionnaire ($r=-.153$, $p<.01$). Finally, a negative and significant correlation was found between participants' risk-taking behaviours and the General Health Questionnaire ($r=-.121$, $p<.01$). No other significant correlations were found.

Table 2. Zero-order correlation among the study variables, means and standard deviation (SD)

	1	2	3	4
<i>Fear of Covid</i> (1)	1			
<i>General Health Questionnaire</i> (2)	-.153*	1		
<i>Covid Risk Behaviors</i> (3)	.235*	-.121*	1	
<i>Age</i> (4)	.162*	-.024	.004	1
M (SD)	4.17 (2.32)	15.1 (3.90)	11.45 (3.90)	39.76 (16.39)

Note: * $p < .05$; ** $p < .01$.

Our first multiple stepwise regression was conducted to observe which variables might predict COV- RB. We analyzed all variables that were significantly correlated with each other in the regression. GHQ was selected as the predictor variable, FCV as a mediator, and COV- RB as the outcome variable.

At Step 1, GHQ accounted for 20% of the variance on COV- RB; at Step 2, GHQ and FCV explained 37% of the variance on COV - RB. The regression model was statistically significant with R^2 -change of .184 and a F change of 50.53 ($p < 0.0001$).

3.2. Measurement model

SEM analysis was performed with bootstrap at 1000, replicating the main predictors of COV- RB. Accordingly, we tested a mediational model with GHQ as the independent variable, FCV as a mediator, and COV-RB as the dependent variable. All tests confirmed that residuals' distribution met the normality requirements (Kolmogorov-Smirnov. Shapiro Wilk. Normal Q-Q plot. Detrended Normal Q-Q plot). A good model fit was obtained with a root mean square error of approximation (RSMEA) of 0.054, a Tucker–Lewis's index (TLI) of 0.955, and a confirmatory factor index (CFI) of 0.976. The results revealed a good model-data fit: χ^2 (124, $N = 592$) = 675.32; $\chi^2 / df = 4.21$, $p < .05$; CFI = .97; TLI = 0.95; NFI = .91 ; RMSEA = 0.06 (90% CI [12.85, 15.15]).

Accordingly, SEM was performed to test the mediation role of the fear of COVID-19 on GHQ and Covid-fear (see Figure 1).

Step one. We performed a linear regression analysis to test Path c with GHQ as a predictor significantly associated with COV-RB (the criterion variable) ($\beta = .46$. $p = .01$).

Step two. The path a examined the association between GHQ (the predictor) to FCV (mediator). The results showed that GHQ and FCV were significantly and inversely associated ($\beta = -.27$. $p < .01$).

Step three. Path b of the structural model showed an association between FCV as a mediator with COV-RB (the criterion variable). Furthermore, we found that FCV and Covid-RB were significantly associated ($\beta = .39, p < .05$).

We conducted a mediation test (Path c') where that relation between GHQ and COV-RB appeared to be weak and non-significant after the inclusion of FCV into the model ($\beta = .19$ vs $\beta = .46$ of the Path c), confirming the mediation role of such a variable (Kenny et al., 2002).

Finally, Sobel tests and bootstrapping tests of indirect effect were run to confirm the mediation findings (Preacher & Hayes, 2008). The Sobel test was statistically significant in total ($z=4.01, p < .05$) and the indirect estimate effects [IE=.36, 95 % CI (.12, .69)]. This finding confirmed the mediation role of FCV in the association between GHQ and COV-RB.

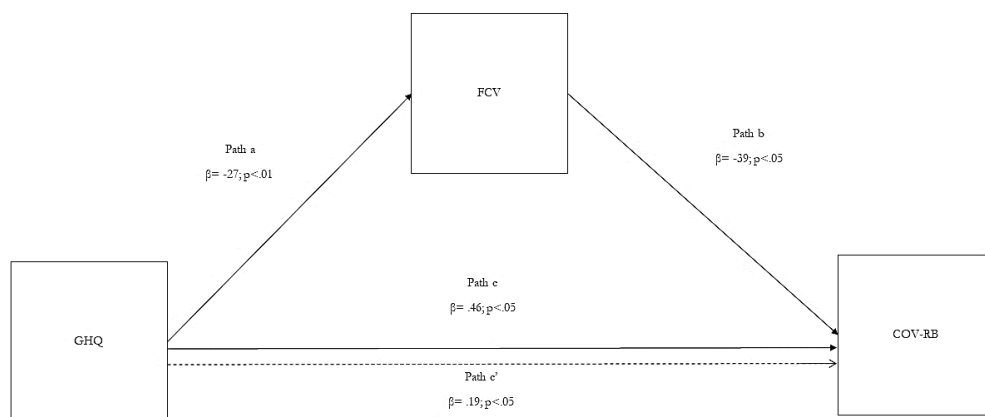


Figure 1. SEM of FCV as a mediator between GHQ and COV-RB

4. Discussion

The present work sought to test the association between mental distress (GHQ) and risky health behaviours during the first outbreak of the Pandemic in Italy and the mediating role of the fear of COVID-19 on these two variables. As one of the most affected populations worldwide, the first wave of the coronavirus infection had a profound impact on the Italian people (Di Giacomo, 2020; Ferraro et al., 2021), both in terms of casualties, perceived stress, diffuse fear, and disruption in all sectors of individuals and community lives (Commodari et al., 2021; Sterace & Ferrara, 2020). Our hypotheses were consistently confirmed, providing insight on the role of fear in mediating mental distress and behaviours that could have put adults at risk during the first wave of the virus in Italy. A negative association between psychological distress and fear of

the infection was found (Betancourt et al., 2016). It seems that higher levels of mental suffering are associated with a lesser fear of the virus (H1), whilst fear is directly and positively associated with risky behaviours (H2) (Ahorsu et al., 2020; Ornell et al., 2020). In other words, people who showed a non-functional fear of the infection, despite their good mental health, demonstrated an increase in non-protective health behaviours (Harper et al., 2020). In reverse, the protective role of fear is illustrated among individuals with good psychological health, leading to less distress despite having a 'healthy' fear of being infected by the virus if not adequately or sufficiently protected (Schimmenti et al., 2020). Even if we cannot draw causalistic inferences on the relationship between variables, it seems that the more Italian adults were exposed to fear, the more they would engage in risky behaviours. For example, when individuals feel fearful and uncertain about how to protect themselves from the COVID-19 contagion, they risk engaging in more inappropriate behaviors, such as delaying the medical treatment when the first symptoms come and do not take appropriate countermeasures to contain the spread of the virus. This result fits into the previously introduced debate about the dual role of fear within the literature, thus as an activator or de-activator of protective behaviours. In agreement with previous studies (Ahorsu et al., 2020; Betancourt et al., 2016), our findings point further toward the hypothesis that the greater is the fear experienced, the lesser is the person's ability to activate and engage in preventive behaviours towards the virus.

We must consider that during the first lockdown, individuals were appalled by immediate and unprecedented regulations that did not favor the social integration of anxiety, stress, and fear among the Italian population (Gori et al., 2021; Lazzerini et al., 2020). For example, social distancing and the health system's slow response could have increased a widely spread sense of panic that exposed individuals to inaccurate understandings and, consequently, to inappropriate behaviours (Benassi et al., 2020; Mantica et al., 2020).

Finally, mental health and risky behaviours showed to be tied thanks to the mediation of the fear of COVID-19 (H3). This relationship might be seen as an essential indicator of the role of decreased mental health in alleviating fear and exposing people to risky behaviours. Good mental health could protect from risk behaviours when fear is not intervening as a mediator, while people psychologically distressed could perceive less fear of getting infected and be exposed to inadequate and dangerous behaviours that could increase the risk of contracting COVID-19 (Jørgensen et al., 2020).

Knowing how mental health is influencing fear and in turn protecting or exposing people to dangerous behaviours is an asset now, and moving forward as the pandemic develops.

According to prior studies on epidemics, fear and perceptions of threat emerge as key determinants of both avoidant and preventive forms of protective behaviour (Andoulin et al., 2020; Cohelio et al., 2020). On this basis, authorities could create a compliance protocol that establishes intensified health and social rules during the outbreak by appealing to the populations appropriate fear of COVID-19, but simultaneously promoting community and individual psychological well-being and quality of life as a potential buffer for functional fear against unhealthy behaviours (Jørgensen et al., 2021; Urban & Urban, 2020). Media campaigns and propaganda have the power to either help control panic or contribute to it, the latter, leading to an unfortunate compromise in compliance to healthy behaviours, community mental well-being, and individuals psychological functioning (Degerman et al., 2020; Li, 2021; Settineri & Merlo, 2020).

These interpretations must be taken cautiously; in fact, the cross-sectional research design and the relatively small number of participants in the study prevent every kind of causal interpretation of the result. However, the association between the variables provides helpful insight into the role of fear as a moderator between mental health and health risk behaviours.

Another limitation in this study is related to the online administration of the questionnaires and the snowball sampling procedure in the data collection phase. Both online administration and the referral system from participants to additional participants, might have excluded certain groups from the survey, further preventing any generalizability of the findings. Additionally, the gender of the sample is unbalanced, with women significantly more represented than men, thus preventing possible comparisons.

Future research must be conducted looking at a more balanced distribution of the sample and, if possible, avoiding the online data collection that was necessary due to the lockdown in Italy that occurred during the pilot phase of the project. Furthermore, qualitative and ethnographic data might shed more light on the role of fear and mental distress in increasing or decreasing dangerous behaviours further exposing people to the risk of infection during a pandemic crisis.

5. Conclusion

The recent spread of the virus has dramatically increased insecurity and fear for people worldwide (Fitzpatrick et al., 2020; Ornell et al., 2020). Fear and disorientation lead to confusion and conflict within Italian society during the first wave of the virus (Motta Zanin et al., 2020; Ruiu, 2020; Settineri & Merlo, 2020). This, in combination with the daily infodemic overload, resulted in an increased observation of health-related dangerous behaviours, jeopardizing the

institutions' efforts to contain the contagion. On the other hand, a complete lack of fear in the mentally distressed population might risk reducing protective health behaviours that could prevent them from contracting the virus.

According to our findings, it is recommended that public health services improve preventive interventions to support community mental health during and after the pandemic crisis, enabling awareness that might control fear as a possible protective factor from unhealthy and dangerous behaviours in a society characterized by good mental wellbeing and psychosocial functioning.

When not irrational or paralyzing, reasonable levels of fear are not necessarily risk factors if correctly channeled by psychologically and emotionally functioning citizens. On the contrary, fear may be a crucial motivational activator that could enable functional health behaviours. Future research should identify how mental health and fear could influence other crucial behaviours in an age of pandemics, such as both vaccination choices and compliance to advanced forms of medical care.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

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