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Women during the Covid-19 lockdown: more anxiety symptoms in women with children than without children and role of the resilience

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Abstract

Backgrounds. In addition to being a public physical health emergency, Coronavirus disease 2019 (COVID-19) has been identified as a psychological health emergency of global concern. The emergency measures implemented by the Italian Government from March to June 2020 included drastic limitations to living conditions that may have impacted on women with children in particular. Nevertheless, few studies focused on them investigating psychopathological consequences of lockdown and protective factors for mental health.

Aims. First aim was to examine differences on generalized anxiety symptoms between working women with children and without children; second, we investigated whether psychological resilience contributed to low emotional impact of the COVID-19 lockdown.

Method. An online survey was administered to 516 working mothers and 514 working women without children. Participants responded to Generalized Anxiety Disorder Scale (GAD7) and Connor-Davidson Resilience Scale (CD-RISC 25).

Results. Significant differences emerged between the two groups, with higher symptoms and percentages of generalized anxiety disorders (GADs) in the group of mothers relative to women without children. Regression analysis showed that CD-RISC 25 score, more than having/not having children, had a predictive effect on GAD7 score, concurring to reduce anxiety symptoms.

Conclusions. Our findings suggest that dealing with lockdown was a particularly stressful experience for working mothers who had to balance personal life, work, and raising children without other resources. Resilience may be a protection against emotional problems and supportive interventions should be implemented in the present and in the future to promote mental health in this population.

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1. Introduction

On March 9th 2020, the Italian Government implemented several emergency measures, including strict limitations on movement on the whole national territory, quarantine, self-isolation and social distancing, aimed to contain the Coronavirus Disease (Covid-19) after an increase in total deaths of nearly 100% in the 48 h before the Decree (Lazzerini & Putoto, 2020). As highlighted by Fiorillo and Gorwood (2020), the pandemic and these related containment measures could have a detrimental impact on mental health, increasing the risk of serious and disabling mental health conditions among adult males and females, including anxious disorders, depressive symptoms, insomnia, anger, fear, and trauma-related disorders (Kang et al., 2020; Wang et al., 2020). Studies among the Italian general population (e.g., Lenzo et al., 2020; Mazza et al., 2020) reported that about a third of participants demonstrated moderate to extremely severe depression, anxiety, and stress during the COVID-19 outbreak.

1.1 Psychological effects of outbreaks of infection on women

Previous research revealed a profound and wide range of psychosocial impacts on people at the individual, community, and international levels during outbreaks of infection. On individual level, people were likely to experience fear of falling sick or dying themselves, feelings of helplessness, and stigma (Hall & Chapman, 2008) with, at the basis of the stigma, "figures such as contamination, fear and disgust understood as the removal of an object that is considered dangerous" (Walsh & Foster, 2020, as cited in Settineri & Merlo, 2020a, p. 1). Also, empirical research on the psychological effects of previous epidemics and related containment measures on individuals seems to confirm the risk of mental health problems. Emotional difficulties and lost income topped the list of problems for individuals who were quarantined during the severe acute respiratory syndrome (SARS) outbreak in Toronto, according to one quantitative study (Blendon et al., 2004). During the same outbreak, Hawryluck et al. (2004) found that approximately one third of respondents to a web survey about quarantine reported symptoms of depression or post-traumatic stress disorder (PTSD). During the Ebola epidemic, for several women, exposing the risks involved with their work resulted in their husbands or mothers-in-law questioning their jobs, which generated tensions. The women did not anticipate that containment could destabilize their status at home, and they were not in a position to protect themselves from this outcome (Desclaux et al., 2007). A study (Taylor et al., 2008) of horse owners quarantined because of equine influenza identified several characteristics associated with negative psychological impacts including female gender and having one child as opposed to no children. Participants in several studies reported fears about their own health or fears of infecting others, in pregnant women and those with young children in particular, with

correlations between this fear and psychological outcomes several months later (for a review, see Brooks et al., 2020).

In the light of these findings, women appear particularly at risk of psychopathological problems during these adverse events. Thus, we decided to focus on them during the current pandemic. Moccia et al. (2020) found that 38% of the Italian general population perceived a form of psychological distress during the COVID-19 outbreak and that females were more likely to develop psychological symptoms in the face of this stressful event than males. Other studies suggested that, in China, females suffered a greater psychological impact of the COVID-19 outbreak as well as higher levels of stress, anxiety, and depression than males (Liu et al., 2020; Wang et al., 2020). Despite these evidences, the research contributions concerning psychological implications of the COVID-19 pandemic on women with children are still scant.

The emergency measures implemented by the Italian Government included closing schools and impossibility for children of staying with grandparents or people other than their parents. Thus, these limitations could have impacted on the working women with children in particular, as they had to balance work and children caring. Shevlin et al. (2020) showed that, in UK, the people who had children living in the home appeared more vulnerable to the challenges of the COVID-19 pandemic. An Italian study conducted by Di Giorgio et al. (2020) found that during the lockdown mothers reported a higher level of emotional symptoms, such as sadness and frustration, relative to the period before COVID-19 pandemic. For the mothers who did not work, COVID-19 restrictions did not influence their subjective perception of psychological outcomes, probably because these mothers, together with the mothers who continued to work regularly, were likely the ones whose daily routing changed to a lesser degree (Di Giorgio et al., 2020). Another study concerning how parents facing the COVID-19 outbreak in Italy (Spinelli et al., 2020) found that parents who reported more difficulties in dealing with quarantine showed more stress. However, all these studies did not compare working women with children and without children, thus new research is needed to better understand the psychological consequences of COVID-19 lockdown specifically on working mothers.

1.2. The protective role of the resilience during adverse events

During stressful events such as COVID-19 outbreak, "complex representations, emotions and above all the resilience mechanisms should be taken into consideration in the causes of a pandemic" (Settineri & Merlo, 2020b, p. 5). Thus, in addition to psychopathological consequences, it appears crucial to investigate the resilience as protective factor in the face of COVID-19 lockdown.

Evidence of resilience is when a person had experienced an extreme adversity but nonetheless still managed to maintain a relatively stable trajectory of healthy functioning and positive adaptation (Bonanno, 2004). Thus, resilience is more than the absence of diagnosable pathology (Bonanno, 2012). Consistent with the "3 Cs" theoretical model of psychological resilience developed by stress researchers (e.g., Reich, 2006), control (i.e., belief that personal resources can be accessed to achieve short and long term goals), coherence (i.e., deeply human desire to make sense and meaning of the world), and connectedness (i.e., need for human contact and support) represent the most important resilience factors following stressful/traumatic events (e.g., Rodriguez-llanes et al., 2013) able to confer psychological and physical benefits to individual (e.g., Pennebaker & Seagal, 1999). Resilience also does not necessarily connote a complete absence of a stress response. To the contrary, even resilient individuals tend to experience at least some transient distress during or in the immediate aftermath of the traumatic event. However, for resilient individuals, distress reactions are usually mild and transient and tend not to interfere with their ongoing ability to function (Bonanno, 2004).

The past literature demonstrated that psychological resilience promotes mental health and adaption in the face of traumatic experiences or adverse events (Southwick et al., 2014). For example, during the SARS outbreak individuals identified the need for institutional and personal supports to assist with obtaining food and other necessities, and emotional support to cope the emergency situation (Cava et al., 2005). Research on how people coped in the aftermath of the September 11th terrorist attack indicated that people who found meaning in the attacks by aligning with their personal values (e.g., friendship, social bonds, spiritual/religious pursuits, kindness to others, compassion), or experienced a sense of control, self-esteem, and belonging, fared particularly well in terms of low rates of psychological complications (Eakman et al., 2016; Lamet et al., 2008). Other authors (Poole et al., 2017) found that the influence of adverse experiences on emotional dysregulation was stronger among individuals with low levels of psychological resilience than among those with high levels of psychological resilience and these findings remained significant when controlling for a range of sociodemographic variables (i.e., age, gender, ethnicity, education, income, marital status, and employment status). During the COVID-19 outbreak few studies investigated relationships between psychopathological domains and resilience. The study by Yildirim and Arslan (2020) on 220 participants from the general population in Turkey found that psychological health during the early stage of COVID-19 was predicted by resilience. The study by Lenzo et al. (2020) on 5,655 Italian people ranged in age from 18 to 81 showed that resilience factors, such as meaningfulness, self-reliance, existential aloneness, and equanimity, were inversely associated with depression, anxiety, and

stress; results of regression analyses indicated that resilience was statically significant in predicting depression, anxiety, and stress. Thus, to investigate potential relationships between psychological resilience and generalized anxiety during COVID-19 lockdown in working women appears an important focus for the current research.

1.3. The current study

To our knowledge, our study is the first that focused on experiencing anxiety by the working women during the COVID-19 lockdown in Italy, examining (a) differences on generalized anxiety disorders (GADs) symptoms between women with and without children, (b) the potential protective role of the psychological resilience, c) living on national territory, and (d) having a steady job. In the light of the literature reviewed above, it is possible to suppose that dealing with lockdown was a particularly stressful experience for women with children who had to balance personal life, work, and raising children, being left alone without other resources (Spinelli et al., 2020). Thus, we hypothesized that such a situation may have resulted in higher anxiety levels in working mothers than in working women without children. However, we also expected that resilience may be a protective factor against emotional problems during the COVID-19 lockdown in this female population.

2. Method

2.1. Participants

The target population comprised Italian working women with and without children. Efforts were made to recruit subjects from all Italian regions (north, central and southern Italy) which had been affected by the pandemic to different extents, so to have a representative sample of the Italian population.

Participants were recruited through e-mail and social media groups. Inclusion criteria were: (a) being at least 18 years old, (b) having Italian nationality, and (c) living on national territory. A total of 1316 respondents began the survey. The final sample size was 1030 women, 516 with children (M_{age} = 38.38 years, SD_{age} = 4.60, age-range = 25-50 years) and 514 without children (M_{age} = 35.92 years, SD_{age} = 5.94, age-range = 25-50 years). Regarding educational level, 4.5% (n = 23) of the women with children had completed primary/middle school, 30% (n = 155) had completed high school, and 65.5% (n = 338) had completed an undergraduate/postgraduate degree; with regard to women without children, 3.9% (n = 20) had completed primary/middle school, 26.1% (n = 134) had completed high school, and 70% (n = 360) had completed an undergraduate/postgraduate degree. The two groups significantly differed on age [$t(966)$ = -

7.429; p = <.001], while they did not significantly differed on educational level [χ^2 (2, N=1030) = 2.43, p = .297].

2.2. Procedure

An online survey was administered from March 14 to March 31, 2020. This timeframe was chosen to assess participants' response during an early phase of the COVID-19 outbreak, following the Italian Government declaration of lockdown (Decree of March 9th, 2020) and the World Health Organization (WHO) announcement of the COVID-19 as a pandemic (March 11th, 2020). The survey was anonymous, and data confidentiality was assured. In the first section of the survey, participants responded to some general questions concerning socio-demographic characteristics including age, education, and employment, as well as some questions related to the COVID-19 potential economic consequences (i.e., fear of negative consequences on personal/family economic status, fear of losing/quitting the job). For the latter, respondents reported their fear using a 5-item Likert rating scale ranging from 0 (not at all) to 4 (very much). Then, participants were asked to respond to the 7-item Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006) and to the Connor-Davidson Resilience Scale (CD-RISC 25; Connor & Davidson, 2003). The survey took about 15 min to be completed. All participants voluntarily gave their informed consent to participate in the study after being informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw from the study at any time. The study met ethical guidelines for human subject protections, including adherence to the legal requirements of the country (Declaration of Helsinki).

2.3 Standardized measures

Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006). The GAD-7 is one of the most widely used measure of GAD symptoms, both in clinical practice and research due to its diagnostic reliability and efficiency (Johnson et al., 2019). GAD-7 can be applied for screening and assessment of the severity of anxiety disorders, as well as for social phobia, PTSD, and panic disorders. The GAD-7 includes seven items based on seven core symptoms and inquires the frequency with which respondents suffered from these symptoms within the last two weeks. Respondents report their symptoms using a 4-item Likert rating scale ranging from 0 (not at all) to 3 (almost every day), such that the total score ranges from 0 to 21. The total score may be categorized into four anxiety degrees: normal (0-4), mild (5-9), moderate (10-14) and severe anxiety (15–21). The GAD-7 is a well-validated screening instrument, and it has demonstrated excellent internal consistency (Cronbach's alpha = 0.911).

Connor-Davidson Resilience Scale (CD-RISC 25; Connor & Davidson, 2003). The CD-RISC 25 is a self-reported scale used to quantify resilience in both general population and in clinical samples. The CD-RISC 25 contains 25 items, all of which carry a 5-point range of responses, as follows: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). In line with the "3 Cs" theoretical model of psychological resilience (e.g., Reich, 2006), the items concern control (e.g., "I believe I can achieve my goals, even if there are obstacles"), coherence (e.g., "Good or bad, I believe that most things happen for a reason") and connectedness (e.g., "I have at least one close and secure relationship that helps me when I am stressed"). The scale is rated based on how the subject has felt over the past month. The total score ranges from 0–100, with higher scores reflecting greater resilience. The CD-RISC 25 has been tested in the general population, as well as in clinical samples, and demonstrates sound psychometric properties, with good internal consistency and test–retest reliability.

2.4 Statistical analyses

All statistical analyses were carried out using SPSS 23.0 for Windows with an alpha level of .05. Prior to conducting analyses, the data were checked for violation of assumptions of normality and homogeneity of variance using Kolmogorov–Smirnov and Levene tests respectively.

The homogeneity of variances justifies the use of the analyses of variance (ANOVA). Thus, a univariate ANOVA was conducted to examine potential differences in the GAD-7 total score between women with children and without children. Effect sizes were calculated as Cohen's *d*: .20 are considered small, .50 medium, and .80 large (Cohen, 1988). A descriptive analysis of the number of women with minimal, mild, moderate and severe anxiety was conducted, as well. In addition, two independent samples *t*-tests were performed to examine potential differences between the two groups on both fear of negative consequences on personal/family economic status and fear of losing/quitting the job.

With regard to CD-RISC 25 total score, a univariate ANOVA was run to analyze potential differences in the CD-RISC 25 total score between the two groups of women.

To determine the extent to which the CD-RISC 25 total score predicted the GAD7 score, one linear regression analysis was carried out. CD-RISC 25 total score, group (i.e., having/not having children), educational level, fear of negative consequences on personal/family economic status, fear of losing/quitting the job, and age were entered into the model as control variables, namely as possible predictors for GAD-7 total score (dependent variable).

3.Results

3.1. Levels of generalized anxiety among women with and without children during the COVID-19 pandemic

Descriptive data for the GAD-7 total score and results of statistical comparisons are presented in Table 1. The women with children reported a generalized anxiety score of 10.55, whereas women without children a score of 9.61. The GAD-7 total score differed significantly between the two groups, with the women with children showing higher generalized anxiety levels than women without children (see Table 1).

Table 2 shows how the mental health of the two groups of women was affected to varying degrees during the COVID-19 lockdown. As a whole, these results showed that about the half (49.51%) of the Italian working women were afflicted with experienced moderate/severe anxiety and about a third of them reported mild anxiety during the COVID-19 lockdown. Of the 516 women with children, 13% had no symptoms of anxiety, whereas the proportions of women with children with mild, moderate, and severe anxiety were 34.8%, 26.2%, and 26%, respectively (see Table 2). Of the 514 women without children, 19.5% had no symptoms of anxiety, whereas the proportions of women with children with mild, moderate, and severe anxiety were 33.7%, 24.8%, and 22%, respectively (see Table 2). Significant differences emerged between the two groups of women in these percentages [χ^2 (3, N=1030) = 8.63, p = .035], with the women with children showing higher percentages of GADs than women without children.

There were no significant differences on fear of negative consequences on personal/family economic status [mothers: M = 2.05, SD = 1.41; women without children: M = 1.88, SD = 1.46; t(1028) = -1.888; p = .059], and on fear of losing/quitting the job [mothers: M = 1.30, SD = 1.40; women without children: M = 1.36, SD = 1.40; t(1028) = .684; p = .494] between the two groups of women.

Table 1. Descriptive data for the GAD-7 total score, CD-RISC 25 total score and results of statistical comparisons (ANOVA) between women with and without children.

	Women with children *(n =516)*		Women without children *(n =514)*		ANOVA		
	M (SD)	range	M (SD)	range	*F*	*p*	*d*
GAD-7 total score	10.55 (5.44)	0-21	9.61 (5.37)	0-21	7.774	**.005**	.25
CD-RISC 25 total score	65.00 (14.73)	21-100	63.97 (15.12)	19-98	1.242	.265	.16

Significant results are in bold.

Table 2. Number and percentage of women with different anxiety level (on GAD-7) in the two groups

	Women with children *(n =516)*		Women without children *(n =514)*		Total women	
*Anxiety level (GAD-7)**	Number	Percentages	Number	Percentages	Number	Percentages
Normal	67	13%	100	19.5%	167	16.2%
Mild	180	34.8%	173	33.7%	353	34.3%
Moderate	135	26.2%	128	24.8%	263	25.5%
Severe	134	26%	113	22%	247	24%

* The GAD7 total scores were categorized into four anxiety degrees (according to Spitzer et al., 2006): normal (0-4), mild (5-9), moderate (10-14) and severe (15–21).

3.2. Levels of resilience among women with and without children during the pandemic

Descriptive data for the CD-RISC 25 total score and results of statistical comparisons are presented in Table 1. The women with children reported a higher resilience score, equal to 65.00, than women without children (resilience score of 63.97). However, the CD-RISC 25 total score did not differ significantly between the two groups of women (see Table 1).

3.3 Regression analysis

One linear regression analysis was conducted to determine whether CD-RISC 25 total score was a predictor of GAD-7 total score, after controlling for group (having/not having children), educational level, fear of negative consequences on personal/family economic status, fear of losing/quitting the job, and age. The adjusted R^2 was .07, $F(6, 1023) = 12.98$, $p < .001$. CD-RISC 25 total score, group, and fear of losing/quitting the job were significant predictors; educational level, fear of negative consequences on personal/family economic status, and age were not significant predictors (see Table 3). With regard to predictor "resilience", this finding can be interpreted as showing that when the other covariates were held constant, for every one point increase in CD-RISC 25 total score, the mean GAD-7 total score decreased by .08 points (B value; see Table 3).

Table 3. Summary of the linear regression analysis for GAD-7 total score, with CD-RISC 25 total score, group (having/not having children), educational level and age as explicative variables, in the whole sample. Summary of the linear regression analysis for GAD-7 total score, with CD-RISC 25 total score, group (having/not having children), educational level, Fear of Negative Consequences on Personal/Family Economic Status, Fear of Losing/Quitting The Job and Age as explicative variables, in the whole sample.

Regression for GAD-7 total score			
Independent variables	Regression coefficient B (CI)	Standardized Beta	*p* value
CD-RISC 25 total score	-.07 (-.09/-.05)	-.19	**<.001**
Group (having/not having children)	.96 (.30/1.62)	.09	**.004**
Educational level	-.51 (-1.09/.08)	-.05	.087
Fear of negative consequences on personal/family economic status	-.04 (-.30/.21)	-.01	.744
Fear of losing/quitting the job	.58 (.32/.85)	.15	**<.001**
Age	.03 (-.03/.09)	.03	.387
Intercept	13.80 (10.72/16.88)	-	**<.001**

Significant results are in bold.

4. Discussion

Despite previous literature has shown that, after adverse events or traumatic events, acute psychological disorders seem more prevalent in women than men (e.g., Blendon et al., 2004; Brooks et al., 2020; Desclaux et al., 2007; Hall & Chapman, 2008; Kendler et al., 2001; McLean & Anderson, 2009; Taylor et al., 2008), to date few studies have focused on the psychological consequences of the COVID-19 lockdown on women and on working women with children in particular. Some studies on general population reported higher levels of stress, anxiety, and depression in female than in males during the COVID-19 outbreak (Lenzo et al., 2020; Mazza et al., 2020; Moccia et al., 2020; Liu et al., 2020; Wang et al., 2020), and more sadness and frustration in a group of 245 Italian mothers during the COVID-19 lockdown relative to the period before pandemic (Di Giorgio et al., 2020). The scarcity of studies specifically focused on Italian working mothers is troubling because there is plausible evidence that parents' emotional problems and dyadic stress could impact on the children's emotional and behavioral reactions (Spinelli et al., 2020) and because the burden of population mental ill-health may have implications for resources during the pandemic and national recovery afterwards (Shevlin et al., 2020). Thus, we believe that the present study, measuring anxiety symptoms and disorders in a representative sample of Italian women during COVID-19 pandemic with a specific focus on

working mothers, has provided an important contribution to this emerging research landscape. Moreover, the study is the first to investigate the potential protective effect of the resilience on anxiety symptoms in this population. The study has also the additional virtues of recruiting participants early in the crisis and using standardized measures, in regard to both anxiety and resilience.

Our results indicated that about the half (49.51%) of the Italian working women were afflicted with experienced moderate/severe anxiety during the COVID-19 lockdown. This is an "alarming" result, because the prevalence of anxiety disorders in Italian women during this pandemic appears clearly increased relative to the general prevalence of anxiety disorders in the Italian female population (de Girolamo et al., 2006; Scorza et al., 2018). Furthermore, the percentage of anxiety disorders that we found in our whole sample appears higher than those found by other authors who studied anxiety disorders in other populations, such as university students (Cao et al., 2020) and Chinese female general population (Huang & Zhao, 2020; Zhang et al., 2020), during COVID-19 pandemic and using GAD-7. For example, Cao et al. (2020) found that the proportions of students with mild, moderate, and severe anxiety were 21.3%, 2.7%, and 0.9%, respectively, that is about half of what we found in our study. A possible explanation for these findings may be that in Italy insufficient measures were taken to support the working women whom, even before the COVID-19 outbreak, were particularly affected by economic and daily difficulties due to the pre-existing Italian economic crisis (Toffanin, 2015). However, our findings appear in line with previous literature that showed the female population particularly at risk of psychopathological problems during adverse events (e.g., Brooks et al., 2020).

Comparing mothers with women without children significant differences emerged, with higher percentages of moderate and severe anxiety in the group of women with children. Moreover, GAD symptoms were more evident in women with children than in women without children. This is consistent with previous evidence suggesting a more increase in emotional disturbance and exhaustion, low mood and irritability in parents relative to not parents in quarantine (e.g., Sprang & Silman, 2013). These differences clearly indicate that, during COVID-19 outbreak, working mothers have experienced more stresses and negative emotions than working women without children, as a result of the emergency measures and lockdown. It is important to note that we did not find significant differences on education level and economic stressors, namely fear of negative consequences on personal/family economic status and fear of losing/quitting the job, between the two groups of women. In other words, mothers and women without children seem to show the same level of concern about job and economic consequences of COVID-19 outbreak. Hence, consistent with our hypothesis, the higher anxiety levels observed

in the mothers relative to women without children may be particularly related to COVID-19 lockdown-related stressors, such as difficulties to balance personal life, work/smart-working and caring for children. The closure of schools may have also contributed to this phenomenon, because parents (mothers in particular) had to deal with their children's education and learning, and this may be a very challenging duty (Spinelli et al., 2020). Despite the two groups of women slightly differed on age (i.e., mothers slightly older than women without children), we believe that this difference did not influence the results, in line with the literature that even reported in younger people a significantly higher prevalence of GAD and depressive symptoms than older people during the COVID-19 outbreak (Huang & Zhao, 2020).

With regard to resilience, the CD-RISC 25 scores of our sample appeared in line with the scores reported by patients with psychopathological problems in the study conducted by Connor and Davidson (2003). In their study (Connor & Davidson, 2003) the authors tested the resilience in the general population as well as in clinical samples (primary care outpatients, psychiatric out-patients in private practice, patients with GAD, and subjects in two clinical trials of PTSD) using the CD-RISC 25. In the general population, the CD-RISC 25 mean score was of 80.4, in primary care outpatients it was of 71.8, in psychiatric out-patients it was of 68.0, in patients with GAD it was 62.4, and in patients with PTSD it was 47.8 and 52.8 respectively. The women with and without children of our sample reported a CD-RISC 25 score of 65.00 and 63.97 respectively. Thus, the CD-RISC 25 scores of our sample appeared very close to the scores reported by patients with GADs and psychiatric problems. According to Connor and Davidson (2003), the findings of our study provided new evidence that resilience may be influenced by health status, i.e. individuals (in this case women) that experience a psychological distress seem to have lower levels of resilience than the general population.

In line with our hypothesis, the resilience strategies that we investigated in the present study seem likely to be effective at reducing GAD symptoms. After entering into the regression model group (having/not having children), educational level, fear of negative consequences on personal/family economic status, fear of losing/quitting the job and age as control variables, resilience resulted significantly and inversely associated with generalized anxiety. These findings are in line with previous studies that documented the protective role of the psychological resilience on psychological consequences of stressful/traumatic events (Lamet et al., 2008; Poole et al., 2017) and with the study conducted by Yildirim and Arslan (2020) in the Turkish general population and by Lenzo et al. (2020) among Italian people during the early stage of COVID-19 outbreak. Our results specifically highlighted the inverse relationship between resilience and generalized anxiety in working women during the COVID-19 lockdown. Current research also suggests that GAD has a multifactorial etiology, i.e. it results from the complex

interaction between biological, environmental and cognitive causal factors. Genetic risk factors that result in neurobiological variations, such as heightened activity in the amygdala, may serve as a diathesis for GAD (Schienle et al., 2011). This increased biological vulnerability can then interact with environmental factors such stressful/traumatic events to predispose individuals to develop GAD (Goldberg, 2008). Additionally, cognitive factors such as avoidance may serve to maintain or exacerbate GAD symptomology (Borkovec et al., 2004). The multifactorial etiology of the GAD may explain why the predictive variables included in the regression model (including resilience) captured a small amount of variance; in fact, other risk and protective factors certainly concur to enhance or to reduce GAD symptoms. Anyhow, our findings seem to suggest that resilience concurs as predictive (and protective) factor able to reduce anxiety symptoms in the working female population during the COVID-19 pandemic. Furthermore, examining the *p* values of the regression analysis, it is possible to note that resilience and fear of losing/quitting the job appear to be the variables most impacting on GAD symptoms (among all the variables included in the model). Thus, our study provides new evidence that resilience strategies may to be effective at enhancing recovery during the COVID-19 pandemic and may also set the stage for posttraumatic growth after the pandemic by helping women to acquire wisdom from adversity, to accept life's uncertainties and to open to new experiences (Calhoun & Tedeschi, 1999).

Some limitations of the present study should be addressed. Firstly, data from this study are limited to a single time point. There is a need for longitudinal studies aimed to understand how GAD symptoms in working mothers, and in women in general, change in the coming months and in relationship with the future measures to control the COVID-19 outbreak. Another limitation is that self-reported levels of anxiety may be susceptible to reporting biases and may not always be aligned with direct assessment made by mental health professionals. Third, other psychological and protective factors that may be relevant to the current results, such as problem- and emotion-focused coping strategies, were not assessed in this work. Future research should investigate the role of other adaptive strategies (affective, cognitive, behavioral, physical, spiritual) that may facilitate functional adaptation and promote mental health and wellbeing in this crisis. Lastly, we may expect that the psychological stress associated with the COVID-19 pandemic is higher for more at-risk women i.e., separated women, women with children with disabilities, very poor families, women with mental disorders (Rohde et al., 2020). The exploration of the phenomenon with those in at-risk situations would help in developing tailored interventions (Spinelli et al., 2020).

5. Conclusion

Overall, this data indicates that the COVID-19 lockdown has determined high prevalence of anxiety symptoms and disorders in Italian working women. Most importantly, GAD symptoms are more common in mothers than in women without children. Thus, these results suggest important implications that should be addressed in the present and in the future in Italy, and in all countries involved in the pandemic, if we want to promote women's and mothers' mental health and prevent the onset of more severe behavioral and emotional problems in them and in turn in their children (Spinelli et al., 2020). For example, the Government should take into consideration the impact of school closures on working mothers by finding ways and resources to support them in caring and education for children, allowing them to serenely continue working. The results also suggest that we should pay more attention to resilience for the development and improvement of well-being and psychological health during the times of crisis. As suggested by Bonanno (2004), resilient individuals distress reactions are usually mild and transient and tend not to interfere with their ongoing ability to function. Thus, supportive interventions for the immediate and for the future should be promoted in this direction, implementing for instance special programs for families that include psychological support and knowledge and training about the resilience strategies (Di Giacomo, 2020). Finally, it is known that children are well attuned to adults' emotional states (Dalton et al., 2020), and mothers' concerns regarding implications of COVID-19 might compromise these mothers' ability to sensitively recognize and respond to children's cues or distress (Dalton et al., 2020). Future step of this research should be to analyze the psychological consequences that the mothers' COVID-19 related anxiety may have on their children during the current pandemic.

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