

Protective and risk social dimensions of emergency remote teaching during COVID-19 pandemic: A multiple mediation study

Fortuna Procentese  | Flora Gatti  | Emiliano Ceglie

Department of Humanities, University of Naples Federico II, Naples, Italy

Correspondence

Fortuna Procentese, Department of Humanities, University of Naples Federico II, via Porta di Massa, 1, 80133 Naples, Italy.
Email: fortuna.procentese@unina.it

Abstract

The changes in teaching due to COVID-19-related restraints generated distress among teachers, putting their job-related efficacy and satisfaction at risk. This study deepens the community-related protective and risk factors in teachers' experience. An online questionnaire detecting social distancing burnout, job-related distress experience, efficacy and satisfaction, and Sense of Community (SoC) was administered to 307 Italian teachers. A multiple mediation model was tested with Structural Equation Modeling. Evidence showed that social distancing burnout could increase teachers' distress rates and, through them, impact their job-related efficacy and satisfaction; however, its effects on the latter depended on the kind of distress mediating. Conversely, SoC could support their job-related efficacy and satisfaction, yet no association with their distress rates emerged. The role of social distancing and Information and Communication Technologies (ICTs)-related distress as the main threats for teachers stems, along with the one of job distress and the community of belonging as assets on which teachers relied.

KEYWORDS

COVID-19, emergency remote teaching (ERT), job distress, job satisfaction, pandemic, Sense of Community (SoC), social distancing burnout, teacher efficacy

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1 | INTRODUCTION

Since the first months of 2020, COVID-19 outbreak suddenly and disruptively changed the way people lived, worked, learnt, and socialized (e.g., Demertzis & Eyerman, 2020; Gatti & Procentese, 2021; Horton, 2020; Matteucci et al., 2021; Procentese et al., 2020; Procentese & Gatti et al., 2021; Puccetti & Luperini, 2020; Tzankova et al., 2022). Indeed, to deal with the contagion, governments and health authorities all over the world adopted several protective measures which restricted citizens' daily activities—for example, contact tracing, quarantine, isolation, local, or national lockdowns—following the general guidelines enacted by the (World Health Organization, 2020a; 2020b). In Italy—which is the country where the present study was carried out—a nationwide lockdown was enforced in the first days of March 2020 and gradually eased since the first days of May 2020 and until Summer, when the contagion curve shrunk. However, from October 2020 on, a second wave of contagion required further restrictions: local, partial or total, stay-at-home orders were issued again, according to the local severity of the contagion; when the local contagion allowed it, these measures were gradually eased again at different extents (Presidente del Consiglio dei Ministri, 2020). Such alternation of more and less severe restrictions lasted until Summer 2021—when the contagion curve shrunk again—with social distancing being always kept as the main protective measure (Collins, 2020). That is, broad social gatherings were not allowed, and common places could not be crowded; several unnecessary facilities and public places were temporarily shut down or only partly open (i.e., with limited capacity and large distances among users) and most of the activities involving groups were totally or partly moved online according to the severity of local contagions and restrictions (Rigotti et al., 2020).

Among these services, schools and Universities were required to totally or partly (i.e., with some students online and some in the classroom) move educational activities online according to the severity of local contagions and restrictions. Overall, their activities were totally kept online for most of those months, to safeguard students' and teachers' health while guaranteeing students' right to study (Aristovnik et al., 2020; Guidetti & Albanesi, 2021; Novara et al., 2021). This required to resort to Emergency Remote Teaching (ERT), that is “a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated” (Hodges et al., 2020). ERT differs from online teaching since the latter rather refers to “experiences that are planned from the beginning and designed to be online” (Hodges et al., 2020), thus requiring careful design and planning of such activities, clear instructions and training about how to use the needed software and tools, and a systematic model for the development of those experiences. Conversely, ERT brought about disruptive and unprepared changes as to the workloads and ways of working for teachers (Bozkurt et al., 2020; Talidong, 2020), who felt in charge of creating positive connections with students and fostering a productive and engaging learning environment despite the Information and Communication Technologies (ICTs) mediated ways of teaching (Alvarez, 2020; Novara et al., 2021)—which they had rarely or never experienced before.

To adapt to these new job-related requests and provide their students with stimulating learning environments without undermining their efficacy or work performances, teachers had to either have or develop adequate technical skills (Chang & Fang, 2020; Procentese & Fantini et al., 2021). Indeed, ERT required proper technical skills for teachers to be able to use the tools and platforms needed to remotely deliver educational activities, and to quickly learn how to integrate these technologies in their teaching activities (Bao, 2020). This made teachers feel unprepared in coping with these changes and innovations (Novara et al., 2021), producing higher rates of ICTs-related job distress (Cardullo et al., 2021). As a consequence, they experienced increased workload and working hours, exceeding the time boundaries they would have had at school (Guidetti & Albanesi, 2021; Novara et al., 2021) due to the need to differently plan their teaching activities and adapt to this new and unfamiliar educational setting (OECD, 2020). Further, the need to manage more complex educational and social scenarios as to their classrooms and the increased working hours also brought about higher rates of job distress at large (Besser et al., 2020; Guidetti & Albanesi, 2021; Klapproth et al., 2020; Novara et al., 2021; Procentese & Fantini et al., 2021; UNESCO, 2020). Overall, this put their job-related efficacy and satisfaction at risk, since both these kinds of

job-related distress could negatively impact these two job-related positive outcomes (e.g., Burić & Kim, 2020; Chen et al., 2020; Klassen & Chiu, 2010; Klassen et al., 2010; Yu et al., 2015).

In light of the above-mentioned job-related changes teachers had to face and of the implications of such changes, the aim of the present study is to test a theoretical model of the community-related protective and risk factors for their job-related distress rates, satisfaction, and efficacy. Specifically, this study deepens (a) the role of teachers' social distancing burnout—that is, the burnout due to the compliance with social distancing measures for a prolonged time (Seiter & Curran, 2021)—as a stressor which may have further worsened their job-related distress rates, with negative impacts on their job-related efficacy and satisfaction through them, and (b) the role of their Sense of Community (SoC, McMillan & Chavis, 1986) as a resource which may have rather supported their job-related efficacy and satisfaction by relieving their job-related distress rates. Indeed, feeling part of and tied to a cohesive and supportive school/academic community represents a resource for individuals, which may counteract the negative impacts of ERT and social distancing measures (Guidetti & Albanesi, 2021; Procentese et al., 2020, 2022; Procentese & Fantini et al., 2021).

2 | SOCIAL DISTANCING BURNOUT

Since the first months of COVID-19 pandemic, individuals felt lost and bewildered due to the loss of their daily routines and activities as well as to the need to redefine their present and future plans, but also their social and relational opportunities (De Vincenzo et al., 2022; Gatti & Procentese, 2021; Novara et al., 2021; Procentese & Fantini et al., 2021). Indeed, social distancing was identified and kept as the main protective measure to be adopted to avoid the increase of contagion (Collins, 2020). Despite its proven effectiveness rates across all stages of the pandemic, such measure “presents multiple demands, not only by constraining where, how, and how often interactions take place, but also by limiting who is communicated with and what types of communication are acceptable” (Seiter & Curran, 2021, p. 3). In light of the above, social distancing has been supposed as a source of stress, exhaustion, and burnout for individuals complying with it (Holmes et al., 2020; Seiter & Curran, 2021), due to the need to do so and adjust to the related emotions for a prolonged time (Bao, 2020). Specifically, in line with other burnout and stress-related constructs (e.g., Adams et al., 2008; Maslach & Jackson, 1981), social distancing burnout was defined as feeling hopeless, trapped in one's house, rundown, worthless, tired, and burned out due to the compliance with social distancing measures (Seiter & Curran, 2021).

With specific reference to ERT, teachers experienced relational difficulties due to the lack of in person social contacts with both students and colleagues (Lee, 2020), which required them to adapt to different—and unprecedented—ways of being-in-relationship with them and managing such social dynamics, threatening their access to the available social resources (Guidetti & Albanesi, 2021; Klapproth et al., 2020; Novara et al., 2021). This need to keep one's social relationships—both personal and work-related ones—alive and maintain the opportunities for social interactions as continuous and natural as possible despite social distancing measures burdened the feeling of being stressed, tired, and under pressure (Procentese & Fantini et al., 2021).

However, while some studies (e.g., Franzen & Wöhner, 2021; Seiter & Curran, 2021) deepened social distancing burnout or fatigue with reference to the development of negative psycho-social consequences (e.g., depressive symptoms), to our best knowledge no study deepened its relationship with the distress individuals experienced in other life domains (e.g., job-related one)—which have been indirectly impacted by the changes brought about by COVID-19 pandemic too—yet.

3 | SENSE OF COMMUNITY AS A PROTECTIVE FACTOR

The feeling to belong and to be bonded to a cohesive community—characterized by reciprocal attention to everyone's needs and opportunities for reciprocal support—represents a protective factor supporting individuals' adaptation to new life circumstances, well-being, and efficacy in the face of disruptive events, as showed by recent studies about COVID-19

pandemic (Gatti & Procentese, 2021; Gattino et al., 2021; Guidetti & Albanesi, 2021; Mannarini et al., 2021; Procentese et al., 2020, 2022; Tzankova et al., 2022). Indeed, the bond to one's community of belonging "provides individuals with a sense of meaning and continuity, belonging and safety, affirmation, and mattering" (Procentese et al., 2020, p. 3); it can help them thinking up individual and collective strategies to face challenges and stressful circumstances, broad workloads, and daily needs (Keyes, 2005; Scotto di Luzio et al., 2014), fostering a more proactive attitude toward the needed changes (Corzine et al., 2017; Drzensky et al., 2012). Overall, through reciprocal support and the feeling of "being in this together," feeling part of and tied to one's community of belonging can reduce individuals' stress rates and enhance their efficacy (Procentese et al., 2020, 2022). Such feeling has been theorized over time as SoC, that is, "a feeling that members have of belonging, a feeling that members matter to each other and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan & Chavis, 1986, p. 9).

With specific reference to school/academic communities, studies showed that teachers' SoC positively associated with their job-related satisfaction, efficacy (Brissie et al., 1988; Petrillo & Donizzetti, 2013), and perception of that community as an open one that offers opportunities for dialog and lacks prejudices and preset ideas (Admiraal & Lockhorst, 2012). That is, when teachers feel bonded to their school/academic community of belonging they also feel emotionally safe in it, satisfied of their work and of their own ability to manage it, able to have open dialogs and positive interactions with other community members. Thanks to the open and supportive relationships with colleagues (McNally et al., 2009), SoC allows teachers to disentangle and modify ineffective teaching practices and other pitfalls as a community (Admiraal & Lockhorst, 2012). Thus, it has been acknowledged as the best and needed condition for the introduction of innovations in school practices—such as ERT and the use of ICTs to deliver teaching activities have been—and for the resolution of new problems without impacting teachers' distress and efficacy rates (Darling-Hammond & Bransford, 2007; Hoekstra et al., 2009; Little, 2003; Meirink et al., 2010; Novara et al., 2021; Zwart et al., 2008). The same conditions of support and collaboration can allow to reduce teachers' isolation (Achinstein, 2002; Hodkinson & Hodkinson, 2003) and support their job-related and overall well-being (Collie & Martin, 2016).

In light of the above, SoC may also protect teachers from the consequences of forced isolation—such as social distancing. Indeed, with specific reference to the ongoing pandemic, belonging and feeling bonded to a school/academic community fostered teachers' responsibility-taking actions and commitment to that community, making them feel they were not alone (Novara et al., 2021). That is, their active involvement and participation in school/academic activities despite social distancing and ERT allowed to keep that communities alive (Guidetti & Albanesi, 2021). Overall, the shared engagement in facing the emergency as a community and the forced discovery of different ways of being-in-relationship enhanced the perception of that community as a cohesive and supportive one (Guidetti & Albanesi, 2021). This could in turn sustain teachers' job-related efficacy despite the needed physical distance and the changes it brought about (Procentese et al., 2022).

4 | THE STUDY

Building on this framework, this study aims at proposing a theoretical model of how teachers' social distancing burnout and bond to their school/academic community of belonging—that is, their SoC—impacted their job-related distress rates (both with reference to their overall job and to the specific introduction of ICTs in it), efficacy, and satisfaction.

On the one hand, SoC will be addressed as a potentially protective factor. Indeed, it associates with both teachers' job-related efficacy and satisfaction (Brissie et al., 1988; Petrillo & Donizzetti, 2013) and with the perception of school/academic communities as open, interactive, collaborative, and supportive (Admiraal & Lockhorst, 2012). Further, as mentioned above, a cohesive community of belonging and a strong bond to it can represent protective factors supporting individuals' adjustment to the new life circumstances, well-being, and efficacy in the face of COVID-19 outbreak, preventing increases in their stress rates (Gatti & Procentese, 2021; Gattino et al., 2021; Guidetti & Albanesi, 2021; Procentese et al., 2020, 2022; Tzankova et al., 2022). Building on this, the relationship of SoC with job-related efficacy and satisfaction will be tested with reference to teachers' pandemic experience too:

H1: *teachers' SoC positively associates to their job-related efficacy (H1a) and satisfaction (H1b).*

In addition, thanks to the open, collaborative, and supportive relationships with colleagues which characterize cohesive and tied communities (McNally et al., 2009), the bond to the school/academic community of belonging also showed its potential in making teachers more prone to modify ineffective teaching practices and other pitfalls (Admiraal & Lockhorst, 2012) and adapt to the needed changes and innovations—such as ERT. That is, it contributes to preventing the increases in their stress rates which may stem due to the troubles in implementing new work practices (Darling-Hammond & Bransford, 2007; Hoekstra et al., 2009; Little, 2003; Meirink et al., 2010; Zwart et al., 2008). In light of the above, the following hypothesis is added to the previous one:

H1: *teachers' SoC negatively associates to their job distress (H1c) and ICTs-related job distress (H1d).*

On the other hand, social distancing burnout will be addressed as a potentially risk factor as to teachers' distress rates, efficacy, and satisfaction. Indeed, complying with social distancing measures for a prolonged time made individuals feel stressed, exhausted, and burned out (Holmes et al., 2020; Seiter & Curran, 2021). With specific reference to teachers, the negative experience related to social distancing burnout may have further burdened the difficulties they experienced in adapting to ERT in the long run—that is, after 1 year of social distancing orders—producing higher rates of job-related and ICTs-related job distress (Besser et al., 2020; Cardullo et al., 2021; Guidetti & Albanesi, 2021; Klapproth et al., 2020; Novara et al., 2021; Procentese & Fantini et al., 2021; UNESCO, 2020). Building on this, this hypothesis follows:

H2: *teachers' social distancing burnout positively associates to their job distress (H2a) and ICTs-related job distress (H2b).*

Further, the tiredness and exhaustion related to social distancing burnout may have also burdened specific difficulties linked to ERT, amplifying teachers' feelings of being unprepared in delivering their work activities in this new way, less effective in doing so, and less satisfied of their actual work (Novara et al., 2021). Thus, this hypothesis is added to the previous one:

H2: *teachers' social distancing burnout negatively associates to their job-related efficacy (H2c) and satisfaction (H2d).*

In addition, according to the established literature, higher rates of job-related distress—be it job distress at large or due to the introduction of ICTs and other innovations in one's work activities specifically—negatively impacts individuals' job-related efficacy and satisfaction (e.g., Burić & Kim, 2020; Chen et al., 2020; Klassen & Chiu, 2010; Klassen et al., 2010; Yu et al., 2015). Building on this and on what is hypothesized in H1c, H1d, H2a, and H2b, the mediator role of both the considered forms of job-related distress in all the above-proposed relationships is hypothesized too:

H3: *teachers' job distress mediates the relationship of their SoC with their job-related efficacy (H3a) and satisfaction (H3b);*

H4: *teachers' ICTs-related job distress mediates the relationship of their SoC with their job-related efficacy (H4a) and satisfaction (H4b);*

H5: *teachers' job distress mediates the relationship of their social distancing burnout with their job-related efficacy (H5a) and satisfaction (H5b);*

H6: teachers' ICTs-related job distress mediates the relationship of their social distancing burnout with their job-related efficacy (H6a) and satisfaction (H6b).

Specifically, building on the previously hypothesized relationships, the indirect effects of SoC—that is, H3 and H4—are expected to be positive, while those of social distancing burnout—that is, H5 and H6—are expected to be negative.

5 | METHODS

5.1 | Participants and procedures

Three hundred and seven Italian teachers took part in the study between March and May 2021. In compliance with the current restrictions enforced by local government and health authorities to contain COVID-19 outbreak, the questionnaire was administered online, and participants were recruited through word of mouth (i.e., snowball sampling procedures were adopted) and by sharing the questionnaire in Facebook groups of Italian teachers, so that it was possible to reach as many teachers as possible. The questionnaire was introduced by an explanation about confidentiality and anonymity issues; participants had to express their informed consent by putting a tick in a box to access it. Data were gathered in full respect of the General Data Protection Regulation (GDPR 27/04/2016 n. 2016/679) and of the Declaration of Helsinki; no IP addresses or identifying data were retained. Participant got no compensation for taking part in the study—that is, their participation was completely voluntary.

Most of participants (91.9%) were women. Age ranged between 22 and 70 years ($M = 45.21$; $SD = 10.37$). Most of the respondents was married or in a cohabitant couple (68.4%) and had children (63.2%); 19.5% was unmarried, 6.5% in an unmarried and noncohabitant couple, 3.9% separated or divorced, and 1.6% widower. As to their education, 54.4% had a master's degree, 25.7% a post-degree title, 16% a high school diploma, and 3.9% a bachelor's degree. Most of the respondents worked in either primary (41.7%) or secondary (39.7%) schools, while 17.6% worked in high schools, and 1% in universities.

5.2 | Measures

The questionnaire included a sociodemographic section, followed by specific measures.

5.2.1 | SoC

The Brief SoC Scale (BSCS, eight items, Peterson et al., 2008) was used after adapting the items to school/academic community (e.g., "I belong in this school/University"). Respondents had to rate their agreement on a 7-point Likert scale (1 = *Strongly disagree*; 7 = *Strongly agree*).

5.2.2 | Social distancing burnout

The Social Distancing Fatigue scale (Seiter & Curran, 2021) was used. It includes 12 items measuring social distancing burnout (e.g., "I feel burned out from social distancing," "I feel emotionally drained from social distancing") and three measuring social distancing tedium (e.g., "Everyday feels the same"). Respondents were asked

to rate their agreement on a 5-point Likert scale (1 = *Strongly disagree*; 5 = *Strongly agree*). According to the aims of the study, only social distancing burnout was included in the model.

5.2.3 | Job distress

The Italian version (Turel & Gaudioso, 2018) of the Distress on the Job Scale (Cohen et al., 1983) was used. It comprises four items referring to how individuals manage stress with reference to their job (e.g., “How often have you felt job-related difficulties were piling up so high that you could not overcome them?”). Respondents were asked to rate how often they had to face the described circumstances during ERT on a 7-point Likert scale (1 = *Never*; 7 = *Always*).

5.2.4 | ICTs-related job distress

Gaudioso's scale (2016) about ICTs-related job distress was used. It comprises four items (e.g., “How often have you felt unable to control what is important for your job role due to the processes related to new technologies?”) adapted from Cohen et al. (1983). Respondents were asked to rate how often they had felt as described in each item during the last 2 weeks on a 7-points Likert scale (1 = *Never*; 7 = *Always*).

5.2.5 | Teacher efficacy

The Ohio State Teacher Efficacy Scale (OSTES, Tschannen-Moran & Hoy, 2001) was used. It is composed of 24 items to be rated on a 9-point Likert scale (1 = *not at all*; 9 = *totally*), detecting respondents' perceptions about their efficacy in facing different situations referred to the core dimensions of teaching: instructional strategies (eight items, $\alpha = 0.97$, e.g., “To what extent can you use a variety of assessment strategies?”), “How much can you do to adjust your lessons to the proper level for individual students?”), classroom management (eight items, $\alpha = 0.98$, e.g., “How much can you do to control disruptive behavior in the classroom?”, “How well can you establish routines to keep activities running smoothly?”), and students engagement (eight items, $\alpha = 0.97$, e.g., “How much can you do to help your students value learning?”, “How much can you do to get students to believe they can do well in schoolwork?”). Since Tschannen-Moran and Hoy (2001) noted that both a total score and a score for each subscale could be calculated when using this scale, the three core dimensions of teacher efficacy were included in the model as three dimensions loading on a unique latent variable—that is, the overall teacher efficacy.

5.2.6 | Job satisfaction

The Italian version (Turel & Gaudioso, 2018) of the three-item factor about job satisfaction (e.g., “My work is enjoyable”) from the Technostress Inhibitors scale (Ragu-Nathan et al., 2008) was used. Participants were asked to rate their agreement on a 7-point Likert scale (1 = *Strongly disagree*; 7 = *Strongly agree*).

5.3 | Data analyses

Confirmatory Factor Analyses (CFA) were run with Structural Equation Modeling (SEM) to test the factor structure of all the measures. To evaluate the model fit, different indices were observed (MacCallum & Austin, 2000): the

comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the Standardized Root Mean Square Residual (SRMR). For CFI and TLI, values equal to or greater than 0.90 and 0.95, respectively, indicate good or excellent fit; for SRMR, values equal to or smaller than 0.06 and 0.08, respectively, indicate good or reasonable fit (Hu & Bentler, 1999). The reliability was checked using Cronbach's α .

All the hypotheses were tested fitting a multiple mediation model using SEM (see Figure 1): teacher efficacy—compounded by its three core dimensions—and job satisfaction were the outcomes, SoC and social distancing burnout the independent variables, job distress and ICTs-related job distress the mediators. Age was included in the model as a control variable.

Before hypotheses testing, leverage value and Cook's *D* were used to verify the absence of outliers and/or influential cases—that is, of significant values which could affect the analyses (Cousineau & Chartier, 2010). To witness the absence of such values, leverage values and Cook's *D* should, respectively, be lower than 0.2 and 1. Multicollinearity was checked through the Tolerance index; it is comprised between 0 and 1 and should be higher than 0.20 to suggest the absence of multicollinearity issues (Craney & Surlles, 2002).

To evaluate the model fit, CFI, TLI, and SRMR were observed (MacCallum & Austin, 2000). Bootstrap estimation was used to test the significance of the results (Hayes, 2018) with 10,000 samples, and the bias-corrected 95% (confidence interval) CI was computed by determining the effects at the 2.5th and 97.5th percentiles.

6 | RESULTS

CFAs confirmed the expected factor structure and a good fit for all the measures. Cronbach's α , fit indices, descriptive statistics, and correlations for all the measures are in Table 1.

Leverage values and Cook's *D* were always lower than 0.08 and 0.07, respectively, suggesting that no outliers nor influential cases were in the data set. Further, Tolerance Index for the study variables was comprised between 0.55 and 0.89, suggesting multicollinearity was not a problem.

The hypothesized model showed a good fit, CFI = 0.91, TLI = 0.91, SRMR = 0.08, yet not all the hypotheses were confirmed (see Figure 2).

Indeed, teachers' bond to their school/academic community showed positive, direct effects on both their job-related efficacy and satisfaction—supporting H1a and H1b—yet no relationship emerged with their job distress and ICTs-related job distress—which is counter H1c and H1d. Conversely, teachers' social distancing burnout showed the expected positive relationships with both job distress and ICTs-related job distress—consistently with H2a and

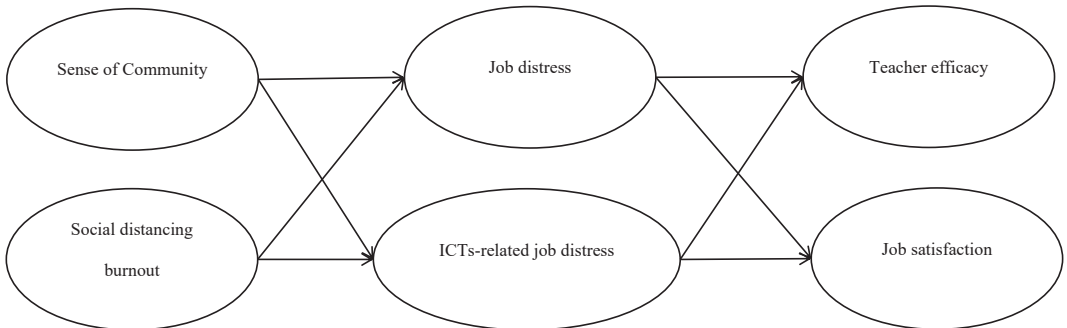


FIGURE 1 Hypothesized model. Only direct paths are shown. ICTs, Information and Communication Technologies.

TABLE 1 Indices of model fit, reliability, descriptive statistics, and correlations for all the study variables.

Variables	CFI	TLI	SRMR	α	M	SD	1	2	3	4	5
1. Sense of Community	0.98	0.97	0.01	0.96	4.09 ^a	1.70	-				
2. Social distancing burnout	0.98	0.98	0.02	0.96	2.38 ^b	1.11	0.070	-			
3. Job distress	0.99	0.96	0.02	0.89	3.08 ^a	1.38	0.001	0.264 ^{***}	-		
4. ICTs-related job distress	0.99	0.99	0.002	0.94	2.58 ^a	1.47	-0.020	0.295 ^{***}	0.721 ^{***}	-	
5. Teacher efficacy	0.93	0.92	0.03	0.98	6.26 ^c	1.97	0.520 ^{***}	0.100	0.038	-0.061	-
6. Job satisfaction	0.99	0.99	0.001	0.96	5.76 ^a	1.63	0.659 ^{***}	-0.029	0.031	-0.076	0.604 ^{***}

Note: $n = 307$.

Abbreviations: α , Cronbach's alpha; CFI, comparative fit index; ICTs, Information and Communication Technologies; M, mean; SD, standard deviation; SRMR, Standardized Root Mean Square Residual; TLI, Tucker-Lewis Index.

^a1–7 range.

^b1–5 range.

^c1–9 range.

*** $p < 0.001$ (two-tailed).

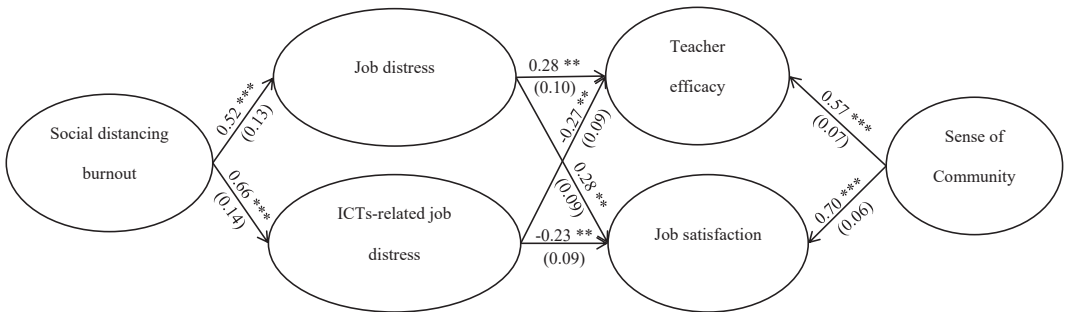


FIGURE 2 Results. $n = 307$. *** $p < 0.001$ (two-tailed); ** $p < 0.01$ (two-tailed). Only direct paths are shown. ICTs, Information and Communication Technologies.

H2b—yet no direct relationship emerged with reference to their job-related efficacy and satisfaction—which is counter H2c and H2b.

Further, teachers' social distancing burnout showed significant indirect effects on their job-related efficacy and satisfaction via both their job distress and ICTs-related job distress. However, the effects mediated by job distress were positive—mismatching both H5a and H5b—while those mediated by ICTs-related job distress were negative, consistently with what was hypothesized under H6a and H6b. As far as partly unexpected, these results are consistent with the direct effects that emerged between the two mediators and the two outcomes, which were always positive for job distress and always negative for ICTs-related job distress, mismatching the established literature. No significant indirect effect emerged when it came to SoC—which is counter H3 and H4.

As to the control of age, it only showed a significant effect on teachers' ICTs-related job distress, $B = 0.02$, $SE = 0.008$, 95% CI (0.002–0.03). Overall, the model explained 34.1% of teachers' job-related efficacy and 50.5% of their job satisfaction.

For a comprehensive overview of the unstandardized effects (B), their standard errors (SE), and their 95% CI see Table 2.

TABLE 2 Model results.

Paths	B (SE)	95% CI
<i>Direct effects</i>		
SoC → job distress	-0.04 (0.05)	-0.14 to 0.07
SoC → ICTs-related job distress	-0.06 (0.06)	-0.17 to 0.05
SoC → teacher efficacy	0.57*** (0.07)	0.44 to 0.72
SoC → job satisfaction	0.70*** (0.06)	0.59 to 0.82
Social distancing burnout → job distress	0.52*** (0.13)	0.28 to 0.80
Social distancing burnout → ICTs-related job distress	0.66*** (0.14)	0.40 to 0.97
Social distancing burnout → teacher efficacy	0.20 (0.14)	-0.08 to 0.46
Social distancing burnout → job satisfaction	-0.19 (0.12)	-0.43 to 0.05
Job distress → teacher efficacy	0.28** (0.10)	0.09 to 0.48
Job distress → job satisfaction	0.28** (0.09)	0.10 to 0.47
ICTs-related job distress → teacher efficacy	-0.27** (0.09)	-0.45 to -0.11
ICTs-related job distress → job satisfaction	-0.23* (0.09)	-0.41 to -0.06
<i>Indirect effects</i>		
SoC → Job distress → teacher efficacy	-0.01 (0.02)	-0.05 to 0.02
SoC → Job distress → job satisfaction	-0.01 (0.02)	-0.05 to 0.02
SoC → ICTs-related job distress → teacher efficacy	0.02 (0.02)	-0.01 to 0.05
SoC → ICTs-related job distress → job satisfaction	0.01 (0.01)	-0.01 to 0.05
Social distancing burnout → job distress → teacher efficacy	0.15* (0.07)	0.04 to 0.32
Social distancing burnout → job distress → job satisfaction	0.15* (0.6)	0.05 to 0.31
Social distancing burnout → ICTs-related job distress → Teacher efficacy	-0.18** (0.07)	-0.35 to -0.08
Social distancing burnout → ICTs-related job distress → job satisfaction	-0.15* (0.07)	-0.32 to -0.04
<i>Total effects</i>		
SoC → teacher efficacy	0.58*** (0.07)	0.44 to 0.72
SoC → job satisfaction	0.70*** (0.06)	0.59 to 0.82
Social distancing burnout → teacher efficacy	0.16 (0.13)	-0.10 to 0.42
Social distancing burnout → job satisfaction	-0.19 (0.11)	-0.41 to 0.04

Note: $n = 307$.

Abbreviations: CI, confidence interval; ICTs, Information and Communication Technologies; SE, standard error; SoC, Sense of Community.

*** $p < 0.001$ (two-tailed); ** $p < 0.01$ (two-tailed); * $p < 0.05$ (two-tailed).

7 | DISCUSSION

The aim of the present study was to test a theoretical model of the community-related protective and risk factors for teachers' job-related distress rates, satisfaction, and efficacy during the forced shift to ERT (Hodges et al., 2020) and the prolonged need to comply with social distancing measures (Collins, 2020). Building on the established

literature and on the peculiarities of COVID-19-related ERT and social distancing experience, the role of (a) social distancing burnout and (b) SoC was deepened. Specifically, the former was hypothesized as further burdening teachers' experience of job-related distress and producing negative effects on their job-related efficacy and satisfaction, while the latter as a protective factor which may rather contribute to easing teachers' job-related distress rates, supporting their job-related efficacy and satisfaction. The direct effects of both SoC and social distancing burnout on teachers' job-related distress (both at large and related to the introduction of ICTs in their work activities), efficacy, and satisfaction were hypothesized (respectively, H1 and H2), as well as the indirect effects of both SoC and social distancing burnout on teachers' job-related satisfaction and efficacy via their job-related distress (respectively, H3, H4, H5, and H6). Overall, the findings confirmed both the risks stemming from social distancing burnout for teachers' job-related distress, efficacy, and satisfaction as well as the protective role of their SoC; however, not all the hypothesized direct and indirect effects were confirmed.

As to SoC, the present results suggest that in the face of the forced shift to ERT it was still able to directly support positive outcomes—that is, job-related satisfaction and efficacy—consistently with the hypotheses; however, it did not play this protective role when it came to the reduction of negative ones—that is, job-related distress and ICTs-related distress—which was counter the proposed hypotheses. Altogether, these findings echo recent ones about the feeling to belong and be bonded to a cohesive and supportive community as a protective factor for teachers' efficacy also in the face of the changes and innovations brought about by ERT (Procentese et al., 2022). Indeed, in the face of the unprecedented challenging circumstances brought about by COVID-19 outbreak, individuals had to team up to identify new paths toward their previous daily activities, which now required different solutions and strategies to be effectively carried out. In this vein, being part of a supportive and cohesive community represented a valuable resource to rely on (Gatti & Procentese, 2021; Procentese et al., 2020, 2022). However, the specificities of the present findings add that this resource showed no potential in easing the stress related to the broader workloads brought about by ERT at large and by the introduction of ICTs in working activities specifically (Cardullo et al., 2021; Guidetti & Albanesi, 2021; Novara et al., 2021).

More complex results emerged as to the effects of teachers' job-related distress. Despite the established literature suggesting that job-related distress negatively impacts workers' efficacy and satisfaction (e.g., Burić & Kim, 2020; Chen et al., 2020), the present findings rather show a positive association of teachers' job-related distress with their efficacy and satisfaction—even though a negative association emerged when it came to specifically ICTs-related distress. As far as unexpected, these results may suggest that the value of one's work activities may have been redefined, along with the role of job-related distress, into teachers' experiences. Such redefinition may have depended on feeling stressed because of their job allowing teachers to keep their mind engaged with activities resembling their pre-COVID-19 daily life despite COVID-19-related restrictions (Procentese & Gatti et al., 2021). However, the social and generative relevance of the job specifically delivered by the participants in this study also suggests another possible explanation for these results. Indeed, it should also be considered that teachers' job-related distress stemmed from the difficulties they experienced in dealing not only with the new tools and procedures, but also with different social dynamics, more emotion-focused contents, and different teaching approaches (Guidetti & Albanesi, 2021; Novara et al., 2021; Pressley, 2021; Procentese & Fantini et al., 2021). That is, during ERT teachers had to deal with their students' emotional experiences, fears, and worries related to COVID-19 pandemic—which they also partly shared—and felt more responsible for students' performances compared to pre-pandemic (Guidetti & Albanesi, 2021; Novara et al., 2021; Procentese & Fantini et al., 2021; Puccetti & Luperini, 2020). Such need to managing different relational dynamics as well as more emotion-focused contents—which reminded them of the social and generative relevance of their work—may have also represented the reason why teachers felt more effective and satisfied with reference to their work despite the higher rates of job-related distress they had to manage. Differently, the effects of ICTs-related job distress may have been due to the newness of this specific stress to teachers. Indeed, teachers felt in charge of fostering an ICTs-mediated positive and productive learning environment (Alvarez, 2020; Novara et al., 2021), which required them to either have or quickly develop proper technical skills (Bao, 2020; Chang & Fang, 2020; OECD, 2020;

Procentese & et al., 2021). However, since they were not used to use digital tools and platforms in their work activities, the stress deriving from their introduction may have rather undermined their feelings of efficacy and their satisfaction due to the need to modify their work procedures to adjust to using such technologies (Bozkurt et al., 2020; Talidong, 2020).

Social distancing burnout showed complex paths too. First, no direct association emerged with the considered positive outcomes—which was counter the proposed hypotheses. However, the expected positive association with job-related and ICTs-related distress was found. Altogether, these findings support the hypotheses about social distancing burnout representing a risk factor which could further burden teachers' distress experiences related to other life domains—in this case, to their job—yet they also show that social distancing burnout did not directly impact the positive job-related outcomes. Further, differently from SoC, the indirect effects of social distancing burnout on job-related efficacy and satisfaction via both the considered dimensions of job-related distress emerged; these effects varied in direction according to the mediator—which seems consistent with the unexpected results about the effects of both the considered job-related distress forms on the outcomes. Such results show that job-related distress could have played a protective role as to teachers' efficacy and satisfaction, turning the effect of social distancing burnout on both from nonsignificant to positive. That is, feeling exhausted, burned out, and tired due to the need to comply with social distancing measured for a prolonged time further burdened teachers' job-related distress, yet the latter supported their job-related efficacy and satisfaction instead of threatening them, as it was discussed above. Conversely, ICTs-related job distress played the expected risk role, turning the nonsignificant effect of social distancing burnout on both efficacy and satisfaction into an indirect, detrimental one.

Taken together, the present study highlights the critical role of ICTs-related distress as the main threat ERT and social distancing brought about for teachers. Indeed, this specific distress emerged as the only variable which is negatively associated to both the considered positive outcomes—that is, job-related efficacy and satisfaction—and which holds potential to turn the impact of social distancing burnout on them into negative. This highlights the need to ensure a proper training for teachers—and other workers, eventually—before embedding ICTs in their work activities in the future, to reduce the stress stemming from ICTs-related procedures and use. This could not be ensured nor delivered in the face of COVID-19-related ERT and remote working procedures due to the unexpected and unforeseen start of the pandemic (Barbuto et al., 2020; Vaziri et al., 2020), despite remote working procedures being only slightly adopted in Italy before COVID-19 outbreak (Molino et al., 2020).

Further, what emerges also highlights the resources on which teachers relied on in the face of the changes brought about by COVID-19 pandemic. Indeed, the pandemic represented an existential crisis (De Vincenzo et al., 2022) as well as a cultural trauma (Demertzis & Eyerman, 2020), as it impacted all aspects of individuals' social, work, and personal lives due to its peculiarities and implications. Thus, it required individuals to identify the available and accessible resources and to rely on them to adjust to this unexpected and unprecedented experience (Procentese & Gatti et al., 2021). Building on the present results, two main kinds of resources specifically emerged. On the one hand, the focus on work activities, workloads, and even the unforeseen difficulties to be managed in one's activities may represent a cognitive asset. That is, teachers may have adapted to the changes into their overall daily life and routines by focusing on the need to develop new teaching strategies and approaches to successfully manage the specific job-related changes and the challenges they brought about—which may have represented a type of self-distracting coping strategy (Procentese & Gatti et al., 2021). On the other hand, the community of belonging emerges as a relational asset on which individuals may have relied to support each other in facing the needed changes and adapting to them (Gatti & Procentese, 2021; Gattino et al., 2021; Procentese et al., 2020, 2022). Building on this, the need to plan interventions aimed at strengthening school/academic communities and valuing them as resources on which their members can rely in the face of high stress rates clearly stems, echoing what emerged from previous studies about such communities (Admiraal & Lockhorst, 2012; McNally et al., 2009; Procentese et al., 2020, 2022).

However, some more research questions emerge from the present study too. Indeed, while some best-guess hypotheses have been proposed for it, the positive relationship of job-related distress with teachers' efficacy and satisfaction deserves further attention for sure. Future studies might deepen this relationship to understand

whether it represents a period-specific result—which might depend on the psychological impact of social distancing measures, the risk of new lockdowns, and the risk of getting infected due to the pandemic, as it was hypothesized—or broader evidence about changes in the work-related culture. Furthermore, be it a period-specific result or broader evidence, such relationship may also be unraveled in other categories of workers and by tackling some possible mediators or moderators, to deepen whether it is category-specific, whether some workers are more likely than others to report it, and whether some other intervening variables might help in explaining it.

7.1 | Limitations and future directions

The present study is not free from limitations. First, the questionnaire was distributed online to comply with COVID-19-related restrictions, which exposed the results to response fatigue—even more due to teachers already having to spend a lot of time online due to ERT. These aspects should be considered along with the need to rely on and snowball sampling procedures, which may have led to self-selection bias, and self-reported measures, which might have produced memory bias. However, these procedures allowed to reach a broad group of teachers during ERT.

Further, the cross-sectional design of the study requires attention too. Indeed, due to this, the described relationships should be considered carefully, and it is not possible to exclude that reversed relationships might exist too—for example, teachers experiencing less job-related satisfaction and efficacy might be more exposed to ICTs-related distress when ICTs are suddenly embedded in their work practices without adequate training. In light of this, circular relationships could be hypothesized too and would require further deepening using longitudinal research designs.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Fortuna Procentese  <https://orcid.org/0000-0002-1617-0165>

Flora Gatti  <https://orcid.org/0000-0003-2149-6570>

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