Mind your language! how and when victims of email incivility from colleagues experience work-life conflict and emotional exhaustion

Chiara Bernuzzi[1] · Deirdre O'shea[2] · Ilaria Setti[3] · Valentina Sommovigo[4]

Abstract

Recent years have seen an increase in the use of email for work-related matters. Although it represents a convenient way to communicate, it can expose workers to the risk of being victims of rude email communications. This two-sample study investigates whether email incivility is related to work-life conflict and emotional exhaustion, directly and indirectly through techno-invasion. In the second study, we replicate the findings in a different country and extend our findings by additionally examining the moderating role of resilience. A total of 199 Italian (Study 1) and 330 British (Study 2) workers completed online questionnaires. In both countries, employees who reported email incivility from colleagues were more likely to experience work-life conflict and emotional exhaustion both directly and indirectly through techno-invasion. In Study 2, resilience moderated the association between email incivility and techno-invasion. When confronted with email incivility, workers who scored low and moderate on resilience were more likely to experience techno-invasion and then work-life conflict and emotional exhaustion, unlike workers high in resilience, for whom the indirect effect was nonsignificant. Our findings suggest that organizations should put in place "netiquette" codes to provide their employees with rules about writing emails in a civil tone. Moreover, workers could benefit from psychological resilience training in addition to training on email management.

Keywords Email incivility · Work-life conflict · Emotional exhaustion · Techno-invasion · Resilience

The use of email for business communication has surged in recent years, becoming a primary tool for information exchange among employees (Park et al., 2018). The COVID-19 pandemic further accelerated this trend, with over half of the global workforce relying on emails for work-related communication (The Radicati Group, 2022). However, the convenience of email comes with growing concerns about rude emails. Thus, the anonymity, invisibility, and asynchronicity of emails can trigger cyber incivility (Nag et al., 2023). Additionally, the lack of prompt feedback and non-verbal cues in emails increases the chances of content misinterpretation (Yuan et al., 2020). As a result, email incivility is a globally widespread phenomenon (Shahwar & Dhar, 2023).

To date, little attention has been paid to email incivility from colleagues, with most studies focused on email incivility from supervisors (Tasoulis et al., 2023) and other related constructs, such as cyberbullying (Wang, 2022). Filling this gap is relevant as the effects of incivility on employees may differ depending on its source (Sliter et al., 2012). Additionally, employees are unlikely to show

✉ Valentina Sommovigo
valentina.sommovigo@uniroma1.it

Chiara Bernuzzi
chiara.bernuzzi@unimi.it

Deirdre O'shea
deirdre.oshea@ul.ie

Ilaria Setti
ilaria.setti@unipv.it

[1] Department of Economics, Management, and Quantitative Methods (DEMM), University of Milan, Milan, Italy

[2] Kemmy Business School, University of Limerick, Limerick, Ireland

[3] Department of Brain and Behavioural Sciences, Unit of Applied Psychology, University of Pavia, Pavia, Italy

[4] Department of Psychology, Faculty of Medicine and Psychology, Sapienza University of Rome, Rome, Italy

habituation effects toward social stressors from colleagues (Sommovigo et al., 2023). This is because relations with colleagues are characterized by continuity and insufficient intimacy to prevent arguments from being perceived as a major threat to one's basic human need to preserve high social esteem (Sommovigo et al., 2023). Considering the growing popularity of team-based company structures, further scientific knowledge on email incivility from colleagues is then essential to effectively counteract its harmful effects.

While there is some research on the impact of cyber incivility on work-related attitudes and behaviours (McCarthy et al., 2019), the effects of email incivility on employee well-being have received less attention. Recent studies identified email incivility as a daily stressor generating burnout symptoms, including emotional exhaustion (Xiao et al., 2023). Furthermore, research has evidenced that the distress from email incivility at work can spill over onto employees' private lives, suggesting its potential impact on work-life conflict (Park et al., 2018).

In this regard, techno-invasion could help explain how email incivility is linked to employee work-life conflict. Thus, given that email incivility manifests itself through information communication technology (ICT) and problematic email interactions are recorded, there is preliminary evidence that email incivility can be "reexperienced" by targets who can ruminate about the uncivil email even outside of work (Park et al., 2018). Although the key role of techno-invasion in affecting employee emotional exhaustion (Ma et al., 2021) and work-life interface (Harris et al., 2022) has been demonstrated, the link between email incivility and techno-invasion has been neglected.

Further, individual differences in resilience could shape how employees react to email incivility (Hobfoll et al., 2018). Thus, this personal resource has been identified as a protective factor against the harmful effects of mistreatment experiences and face-to-face workplace incivility (Sommovigo et al., 2019; Nguyen & Besson, 2023). However, it remains unclear whether the protective role of resilience can be extended to uncivil online communications. Addressing this gap is relevant because resilience can be enhanced via training (Joyce et al., 2018).

Therefore, drawing on the Conservation of Resources (COR) theory (Hobfoll et al., 2018), this study aims to investigate whether email incivility from colleagues would be directly and indirectly (via techno-distress invasion) related to emotional exhaustion and work-life conflict and whether these associations would be conditional on resilience. In pursuing these objectives, this study moves a step forward as it is the first to investigate whether techno-invasion can be a psychological mechanism explaining how email incivility is linked to emotional exhaustion and work-life conflict among affected employees. In doing so, this study answers the call for more research to comprehend the impact of incivility on non-work settings (Park et al., 2018), thereby extending scholarly understanding of the spillover effects of email incivility. Additionally, by identifying resilience as a protective factor against the harmful consequences of email incivility, this study deepens our understanding of the personal conditions that can buffer the link between email incivility and well-being outcomes. In doing so, this study provides insights for designing interventions to help employees maintain optimal functioning in the face of uncivil emails.

Theoretical model and hypotheses

Email incivility and emotional exhaustion

Email incivility has been described as a specific form of cyber incivility referring to uncivil behaviours and comments that violate workplace norms of mutual respect exhibited through email-mediated interactions (Lim & Teo, 2009). According to the COR theory (Hobfoll et al., 2018), email incivility represents a stressful event as it threatens employees' valued conditions (e.g., being respected at work), personal (e.g., self-esteem) and social (e.g., co-worker support) resources. When confronted with email incivility, employees are likely to spend resources to self-regulate negative emotional states (e.g., feelings of rejection) and think about their situation (e.g., worrying about the intentionality and motives behind the uncivil email; Park et al., 2018; Sommovigo et al., 2020). Whether employees are unsuccessful in counterbalancing the resource loss via appropriate conservation of resources strategies (e.g., by replacing the lost resources with other resources in order to counterbalance the loss), they may feel resource-depleted, eventually developing feelings of emotional exhaustion (the core dimension of burnout referring to feelings of being emotionally overextended by one's work; Maslach et al., 2001). Accordingly, previous studies have shown that being targeted of workplace mistreatment (Anjum et al., 2022), cyber incivility from supervisors (Shahwar & Dhar, 2023) and general cyber incivility (Xiao et al., 2023) increased the likelihood that victims developed burnout symptoms. Hence, we propose:

Hypothesis 1 Email incivility will be positively associated with emotional exhaustion.

Email incivility and work-life conflict

Recently, we have witnessed the development of a body of research focused on the spillover effects of workplace incivility on employees' private lives. According to this stream of research, employees confronted with incivility from outsiders (Sommovigo et al., 2022) or intra-organizational members (He et al., 2021) are likely to experience greater work-to-life conflict. Thus, victims of incivility tend to carry the resulting negative emotions home and therefore become more easily upset with their family members and less willing to engage in social interactions at home, which makes it even harder for them to restore their resources (Lim et al., 2018; Sommovigo et al., 2022; Wang et al., 2022). In addition to the spillover of their negative emotions into the private life domain, victims of incivility frequently spend time worrying about the incivility incidents or adopt dysfunctional coping strategies, such as withdrawal (Lim et al., 2018; Sommovigo et al., 2022). Based on the COR theory (Hobfoll et al., 2018), such reactions are likely to interfere with employees' capability to fulfil requirements from the private life domain (Lim et al., 2018) because they leave employees with fewer resources available to meet role demands from their non-working life sphere. There is also some evidence that cyber incivility at work can spill over to the family domain, resulting in negative family-related outcomes. In this regard, Park and Haun (2018) showed that email incivility-related stress went beyond the targets' work domain, crossed over to their partners, and further spilled over back to the partners' workplace. Thus, based on the COR theory (Hobfoll et al., 2018), using resources to deal with email incivility may leave affected employees with lower resources to perform extra-work activities, resulting in work-life conflict. This is also consistent with the spillover theories suggesting that people may experience blurring of work-family boundaries, such that emotions, and behaviours experienced in the work domain can have an impact (either positive or negative) in the family domain (Bernuzzi et al., 2021). Therefore, we suggest:

Hypothesis 2 Email incivility will be positively associated with work-life conflict.

The mediating role of techno-invasion

In recent years, the adoption of remote working arrangements and the use of technology for this purpose, make it increasingly difficult for employees to mentally disconnect themselves from work during non-working time (Park et al., 2018). The possibility to read work emails on personal mobile devices can create the conditions for employees to receive and read uncivil work-related emails even during their free time. Even when problematic email communications are received during working hours, employees can read them at any time because such communications are recorded and easily retrievable outside of work via personal devices (Park et al., 2018). Given the ambiguous nature of incivility, employees may then be tempted to read the content of the email multiple times in an attempt to disclose the meaning and intention behind the electronic communication. As a result, employees may spend a lot of time and energy and attribute excessive attention to the received uncivil communication, thus engaging in rumination tendencies (Park et al., 2018). Accordingly, previous studies demonstrated that being victims of incivility by intra-organizational members increased the likelihood of rumination (Demsky et al., 2019). Therefore, employees may continue to think about uncivil emails during non-working time, which may leave them with fewer resources (Hobfoll et al., 2018) and the feeling that work-related technology permeates their private life (i.e., techno-invasion, the component of technostress related to the feeling that ICT-based work demands invade employees' non-work time; Molino et al., 2020). Thus, we hypothesize that:

Hypothesis 3 Email incivility will be positively related to techno-invasion.

Recently, Park and colleagues (2018) found that on days when employees were exposed to cyber incivility, they experienced higher affective and physical distress at the end of the workday which, in turn, was related to greater distress the next morning. This was especially likely when targets of incivility did not properly recover their lost resources. This is understandable based on the COR theory (Hobfoll et al., 2018). In line with this theory, employees have to mobilize their available resources by engaging in resource conservation strategies to restore resources depleted by stressful work events (e.g., email incivility). However, if employees are unsuccessful in doing so, they may lose further resources. In this regard, previous research suggests that given that email interactions are recorded email incivility can be "reexperienced" by targets, resulting in rumination about uncivil emails (Park et al., 2018). This may make feel targets invaded by technologies and unable to compensate through appropriate resource replacement strategies (Park et al., 2018). In such a situation, further loss of resources may occur, increasing the risk of emotional exhaustion. Accordingly, previous studies demonstrated that techno-distressed employees and employees experiencing techno-invasion were more likely to be emotionally exhausted (Ma et al., 2021). Notably, Bauwens and colleagues (2021) showed that techno-invasion was the dimension of technostress

most likely to predict employees' emotional exhaustion. Hence, we expect that:

Hypothesis 4 Techno-invasion will mediate the relationship between email incivility and emotional exhaustion.

The technostress literature has widely demonstrated that the detrimental effects of techno-invasion in the workplace are likely to spill over to the private life domain, resulting in work-life conflict (Molino et al., 2021; Harris et al., 2022). Although the link between techno-invasion and work-life conflict is well-documented, no previous studies have examined whether the spillover effects of techno-invasion onto employees' private life may be fuelled by email incivility. Nevertheless, drawing on the COR theory (Hobfoll et al., 2018), we expect that victims of email incivility will be likely to deploy time and energy to attribute meaning to the uncivil email (e.g., to figure out the reason for the disrespectful treatment), think about it, self-regulate their negative emotions, and manage the subsequent stress associated with the resulting feeling that ICT technology penetrates the home boundaries (as the uncivil message is mediated by email; Harris et al., 2022; Park et al., 2018). This can leave employees with lower time and fewer energy resources left to meet demands from their private life domain, making it harder for them to maintain a high-quality performance and engage satisfactorily in this domain (Bernuzzi et al., 2022a, b). Thus, employees are likely to take after-work time and energies devoted to face additional tasks resulting from the cognitive and emotional interference related to uncivil emails received via work technologies (e.g., mobile email) away from home duties, reducing their ability to handle competing demands arising from the private life domain (Harris et al., 2022). Therefore, we hypothesize:

Hypothesis 5 Techno-invasion will mediate the relationship between email incivility and work-life conflict.

The moderating role of resilience

Consistent with the COR theory (Hobfoll et al., 2018), personal characteristics represent resources to the extent that they aid stress resistance. As such, individuals with more resources are less vulnerable to resource loss than those with fewer resources. In this study, we argue that resilience, which refers to a dynamic process that enables individuals to cope with stressful circumstances and recover from hardships (Bernuzzi et al., 2022a, b), can be a key personal resource. Indeed, based on previous research, resilience can enable employees to face professional challenges successfully and reduce their odds of perceiving potentially ego-threatening

events, such as workplace incivility, as significant obstacles to the quality of their work functioning (Clercq & Belausteguigoitia, 2023; Sommovigo et al., 2019). Thus, drawing on the COR theory (Hobfoll et al., 2018), people with high resilience levels possess a wide range of resources they can rely on to flexibly cope with and proactively prepare themselves for addressing uncivil emails (Sommovigo et al., 2019), being less vulnerable to resource loss (Hobfoll et al., 2018). Indeed, highly resilient employees tend to adopt effective strategies to mobilize available resources to protect themselves against resource losses (Sommovigo et al., 2019) and recover from mistreatment and incivility experiences (Sommovigo et al., 2019). This may also allow them to perceive uncivil emails as fewer threatening events resulting in lower intrusive thoughts about these events, and less use of ICT outside of work (Clercq & Belausteguigoitia, 2023; Sommovigo et al., 2019). Resilient employees could then be less likely to feel invaded by ICTs in their private life domain (De Clercq & Belausteguigoitia, 2023). Accordingly, previous studies have shown that resilience can help people cope with mistreatment and uncivil experiences, buffering its negative effects on employee work-related outcomes (Sommovigo et al., 2019; Nguyen & Besson, 2023). Therefore, we hypothesize:

Hypothesis 6 Resilience will buffer the positive effect of email incivility on techno-invasion.

Overview of the current research

Previous methodologists have claimed that research involving multiple studies can substantially contribute to the literature via replication and extension (Montani et al., 2020). Likewise, some scholars have recommended examining theoretical models, or a portion of them, through improved, or at least diverse, independent empirical attempts (Cortina et al., 2017). Following these recommendations and in line with what was done by previous researchers (e.g., Montani et al., 2020), we conducted two studies to test how email incivility would be related to work-life conflict and emotional exhaustion. Study 1 used a cross-sectional design and was conducted on a small sample of Italian workers during the pandemic to test the direct relationship between email incivility and two outcomes (i.e., work-life conflict and emotional exhaustion) and the mediating role of techno-invasion in this relationship. Study 2 aimed to replicate Study 1's findings in another country during post-pandemic times using a larger sample of full-time workers from United Kingdom and extend the previous results by examining the moderating role of resilience (Fig. 1).
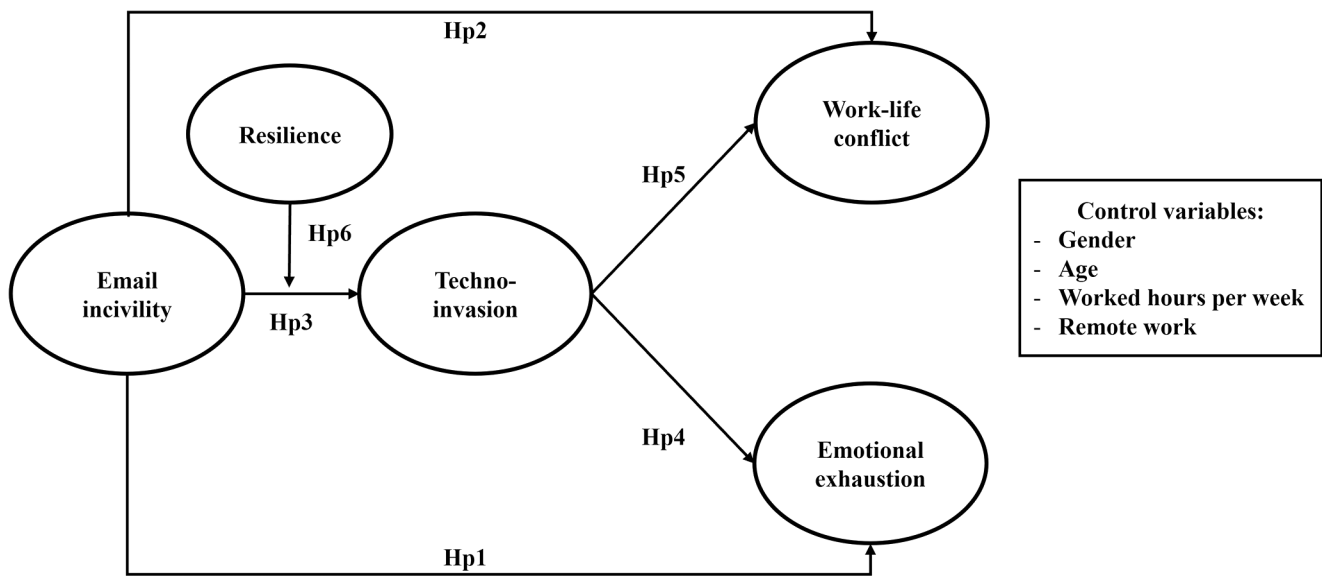
Fig. 1 Conceptual model

Study 1

The purpose of study 1 was to investigate whether email incivility would be related to emotional exhaustion and work-family conflict, directly and indirectly as mediated by techno-invasion.

Method

This cross-sectional study was conducted between February and March 2021 during the COVID-19 emergency in compliance with the ethical standards included in the Declaration of Helsinki and provided by the Italian National Psychological Association. All participants provided their informed consent before taking part in the research. After receiving ethical approval from the relevant university Research Ethics Committee, two master's students in psychology distributed the online survey through social network sites (i.e., LinkedIn, Facebook, WhatsApp, and Instagram). The survey was administrated utilizing a form from a spreadsheet in Google Sheets. The inclusion criteria were as follows: to be at least 18 years of age, to be working in Italy at the time of partaking, to be performing working activities (in the office or remotely) that required the frequent use of email in communication with one's colleagues, and to provide an informed consent form. The survey cover sheet provided respondents with information about the study goals and ensured the voluntary nature of their participation and the anonymity of the responses. The resulting convenience sample included 215 workers. We excluded eight participants who did not meet the study criteria (i.e., they were not using email frequently to communicate with their colleagues) and eight respondents because of incomplete responses (i.e., less than 60% of the questionnaire). Thus, the final sample was composed of 199 Italian workers. Most participants were women (67.30%) with an average age of 34.52 years old (SD: 11.87). Approximately half of the respondents (47.90%) had begun to work remotely due to COVID-19. Respondents worked an average of 34.70 h per week (SD: 10.41). The sample was distributed by sector as follows: professional, scientific, and technological activities (24.3%); administrative and support service activities (18.0%); human health and social work activities (11.7%); and financial, and real estate activities (10.1%); public administration (9.0%); accommodation and food service activities (7.9%); education (7.9%); transportation and storage (7.4%); and information and communication (3.7%).

Measures

Email incivility was assessed using the 14-item Cyber Incivility Scale (Lim & Teo, 2009). Participants rated how frequently over the last six months they were usually confronted with uncivil behaviours enacted by their colleagues via emails, such as making derogatory remarks about the person through email or inserting sarcastic comments between paragraphs in emails (e.g., *Put you down or was condescending to you in some way through email*), on a 5-point Likert scale (1 = *not at all*, 7 = *all the time*). Since an Italian validation of this scale was not available, we translated this scale following standard guidelines for translating surveys (Sousa & Rojjanasrirat, 2011). The forward translation made by one native Italian-speaking scholar was revised by a bilingual expert panel that identified suitable alternatives to inappropriate expressions. Then, an independent

translator translated all items back into English. The resulting back-translated version was compared with the original version of the scale by bilingual experts and further amends were implemented.

Techno-invasion was measured using the 3-item Techno-invasion subscale from the Italian Technostress Creators Scale (Molino et al., 2020). Respondents indicated how frequently they felt their personal life was invaded by work emails (e.g., *I feel my personal life is being invaded by work emails*; α: 0.92) on a 7-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Work-life conflict was evaluated using the 5-item Work-Family Conflict Scale in its Italian validation (Colombo & Ghislieri, 2008). Respondents indicated the extent to which they agreed with each item concerning the interferences of job demands on non-work duties (e.g., *My job produces strain that makes it difficult to fulfil non-work duties*; α: 0.92) on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Emotional exhaustion was evaluated using the 5-item subscale from the Italian validation of the Maslach Burnout Inventory-General Survey (Borgogni et al., 2005). Respondents indicated how frequently they suffered from lack of energy and emotional fatigue experiences (e.g., *I feel used up at the end of the workday*, α: 0.92) on a 7-point Likert scale (0 = *never*, 6 = *daily*).

Control variables. We controlled for gender, age, hours worked per week, and remote work since previous studies indicated that these variables are related to techno-invasion, work-life interface, and psycho-physical well-being (e.g., Molino et al., 2020; Harris et al., 2022).

Results

Measurement reliability and confirmatory factor analysis

Using IBM SPSS Statistics 25, we first examined the psychometric properties of the study scales. There was no sign of multicollinearity because the variance inflation factor values ranged from 1.11 to 1.38 and the tolerance values ranged from 0.72 to 0.90, which is far below the recommended threshold of 10. The skewness values (ranging from 0.03 to 1.18) and kurtosis (ranging from −1.07 to 1.90) were appropriate. All factor loadings of items on their corresponding constructs were statistically significant and above the 0.5 cut-off points, suggesting at least a medium correlation with their respective construct (i.e., email incivility: 0.55-0.78; techno-invasion: 0.74-0.88; work-life conflict: 0.83-0.93; emotional exhaustion: 0.83-0.88). Moreover, the results showed that the composite reliability coefficients for

the study variables ranged from 0.86 to 0.96. Likewise, all average variance extracted values for the study variables were above the 0.50 cut-offs ranging from 0.55 to 0.90. All study scales had satisfactory internal consistencies showing Cronbach's alphas ranging from 0.71 to 0.92. The descriptive statistics, and correlations for the study variables are reported in Table 1.

We also conducted a series of comparative confirmatory factor analyses (see Table 2). Given the size of our sample (i.e., 199) relative to the number of items (i.e., 27), we adopted the parceling technique to maintain an optimal indicator-to-sample-size ratio (Little, 2013). Thus, model fit indices can become problematic when the subject-to-item ratio is below the recommended 10:1 ratio (Little, 2013), as in the case of our research. According to what has been proven by Little (2013), item parcels ameliorate the sample size-to-parameter ratio, reducing the odds that parcels will be affected by the method effects related to single items. Moreover, item parcels are more reliable as they reflect a broader proportion of true-score variance and increase convergence and stability, being especially suitable for models having an unfavorable indicator-to-sample-size ratio (Montani et al., 2020). Following Little's (2013) suggestions, we then created three parcels for the measures of email incivility, work-life conflict, and emotional exhaustion by combining items with higher factor loadings with those with lower factor loading. The fit indices of the four-factor model were satisfactory ($\chi^2 = 95.61$, df = 48, $p = .00$, RMSEA = 0.07, RMSEA [90% CI] = [0.05, 0.09], SRMR = 0.05, CFI = 0.97, TLI = .96) and outperformed all alternative models, supporting the distinctiveness of the study variables.

Harman's single-factor test was conducted to detect common method variance. The results indicated that the first factor explained the 42.31% of variance without rotation. Then, no single factor had particularly significant exploratory power, suggesting that common method bias did not seem to substantially impact our study.

Hypotheses testing

To test the hypothesized mediating role of techno-invasion in the relationship between email incivility and its expected two outcomes (i.e., work-life conflict, and emotional exhaustion), we conducted a mediation analysis with the ML method of Mplus Version 8, using the bootstrapping test and a bias-corrected 95% confidence interval (CI) with a resampling procedure of 1,000 bootstrap samples. In line with our hypothesized model (see Table 3), email incivility was positively related to techno-invasion ($\beta = 0.27$, $p < .01$, 95% CI [0.10, 0.41]) which, in turn, was positively related to work-life conflict ($\beta = 0.49$, $p < .001$, 95% CI [0.31, 0.62]) and positively associated with emotional exhaustion

Table 1 Descriptive statistics, internal reliabilities, and correlations for the study variables

Italy (Study 1)

	M	SD	Sk.	Kur.	CR	AVE	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Cyb.	4.43	1.82	0.03	-1.07	0.92	0.51	0.90						
2. Inv.	2.57	1.08	0.19	-0.85	0.84	0.64	.25**	0.71					
3. WLC	3.46	1.55	0.26	-0.68	0.94	0.76	.29**	.50**	0.92				
4. Exh.	2.64	1.46	1.18	1.90	0.93	0.73	.38**	.38**	.54**	0.91			
5. Sex	-	-	-	-	-	-	-0.05	0.01	0.08	0.10	-		
6. Age	-	-	-	-	-	-	0.03	0.04	0.01	-0.01	-0.16**	-	
7. Hours	-	-	-	-	-	-	.18**	0.06	.17*	0.09	-0.31**	.33**	-
8. Remote	-	-	-	-	-	-	0.10	0.14	0.09	0.04	0.01	-0.16**	0.01
9. Res.	-	-	-	-	-	-							

UK (Study 2)

	M	SD	Sk.	Kur.	CR	AVE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Cyb.	1.75	0.52	0.92	1.09	0.90	0.51	0.87								
2. Inv.	1.82	1.01	1.11	0.23	0.91	0.78	.25**	0.85							
3. WLC	3.48	1.67	0.10	-1.14	0.97	0.86	.23**	.55**	0.96						
4. Exh.	2.58	1.68	0.26	-0.99	0.96	0.82	.32**	.58**	.41**	0.95					
5. Sex	-	-	-	-	-	-	0.02	-0.01	-0.04	-0.03	-				
6. Age	-	-	-	-	-	-	-.11**	-0.05	0.04	-.15**	-0.09	-			
7. Hours	-	-	-	-	-	-	0.10	.18**	.23**	.20**	-0.16**	-0.04	-		
8. Remote	-	-	-	-	-	-	-0.02	-0.02	0.10	-0.08	-0.09	-0.04	0.01	-	
9. Res.	2.70	0.63	-0.38	0.80	0.92	0.54	-.16**	-0.09	-.13**	-.30**	0.01	.12**	.03	0.01	0.90

Note Boldfaced numbers on the diagonal represent Cronbach's alpha; Cyb. = email incivility, Inv. = invasion, WLC = Work-life conflict, Exh. = emotional exhaustion, Res. = resilience, M = mean, SD = standard deviation, Sk. = skewness, Kr. = kurtosis, CR = Composite reliability, AVE = average variance explained

$^* p < .05$, $^{**} p < .01$; Gender: 0 = male, 1 = female; Age: measured in years; Worked hours per week: measured in number of hours; Remote work: 0 = no, 1 = yes

($\beta = 0.36, p < .001$, 95% CI [0.20, 0.49]). Email incivility was positively and directly related to work-life conflict ($\beta = 0.18$, $p < .01$, 95% CI [0.01, 0.29]) and emotional exhaustion ($\beta = 0.30$, $p < .01$, 95% CI [0.12, 0.43]). Moreover, techno-invasion partially mediated the relationship between email incivility and work-life conflict ($\beta = 0.10$, $p < .05$, 95% CI [0.04, 0.18]). Likewise, techno-invasion partially mediated the relationship between email incivility and emotional exhaustion ($\beta = 0.13$, $p < .05$, 95% CI [0.05, 0.23]).

Study 2

In Study 2, we replicated the approach of Study 1 with a sample of workers from the UK. We administrated the same survey in its original English version with the addition of the resilience scale. We conducted the same analyses, extending the previous mediation model by examining the moderating role of resilience in the relationship between email incivility and the two outcomes (i.e., work-life conflict, and emotional exhaustion).

Method

Before beginning data collection, we obtained ethical approval from the relevant univeristy research ethics committee. Data were collected between June and July 2022 in a post-pandemic period. Participants were recruited using Prolific Academic, an online crowd-sourcing research platform that enables researchers to collect data for applied research projects from a large and various workforce. There is evidence that data obtained through online platforms are at least as reliable and different as those collected using traditional approaches (e.g., Walter et al., 2019). To participate, respondents were required to be working in the UK at the time of filling, to be using email to communicate with their colleagues, to be 18 years of age or older, to provide an informed consent form (i.e., we applied the same recruitment criteria we used to select Italian respondents). Participants who completed the online survey were rewarded with £2.10. To check the quality of the data collected, we included attention checks. After being informed about the study goals and ensured of the confidentiality of their answers, all participants gave their informed consent before taking part in the research. We excluded three cases because they failed to answer attention checks.

The final sample included 330 workers from several UK firms. Most participants were women (59.70%) with an average age of 38.64 years old (SD: 4.50). More than half of the respondents (88.50%) were working remotely. Respondents worked an average of 37.82 h per week (SD: 10.39). The sample was distributed by sector as follows: financial,

Table 2 Results of expected CFA and alternative models

ITALY

Model	χ2	df	p	RMSEA	RMSEA [90% CI]	SRMR	CFI	TLI
4-factor model[d]	95.612	48	0.00	0.07	[0.05, 0.09]	0.05	0.97	0.96
3-factor model[c]	169.11	51	0.00	0.11	[0.09, 0.13]	0.07	0.92	0.89
2-factor model[b]	474.11	53	0.00	0.20	[0.18, 0.22]	0.10	0.72	0.65
1-factor model[a]	744.78	54	0.00	0.25	[0.24, 0.27]	0.15	0.54	0.43

UK

Model	χ2	df	p	RMSEA	RMSEA [90% CI]	SRMR	CFI	TLI
5-factor model[h]	109.40	80	0.02	0.03	[0.01, 0.05]	0.03	0.99	0.99
4-factor model[g]	415.42	84	0.00	0.11	[0.10, 0.12]	0.09	0.91	0.85
3-factor model[f]	789.94	87	0.00	0.16	[0.15, 0.17]	0.11	0.82	0.78
2-factor model[e]	1501.33	89	0.00	0.22	[0.21, 0.23]	0.13	0.64	0.57
1-factor model[a]	2103.07	90	0.00	0.26	[0.25, 0.27]	0.17	0.48	0.40

Note df = degree of freedom; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residuals; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index

[a] All indicators load on a single factor

[b] Work-life conflict, techno-invasion, and emotional exhaustion load on the first factor, email incivility loads on the second factor

[c] Cyber incivility and techno-invasion load on the first factor, work-life conflict loads on the second factor, emotional exhaustion loads on the third factor

[d] Email incivility, techno-invasion, work-life conflict, and emotional exhaustion load on different factors

[e] Work-life conflict, techno-invasion, emotional exhaustion, email incivility load on the first factor, resilience loads on the second factor

[f]. Work-life conflict and techno-invasion load on the first factor, email incivility and emotional exhaustion load on the second factor, resilience loads on the third factor

[g] Work-life conflict loads on the first factor, email incivility and techno-invasion load on the second factor, emotional exhaustion loads on the third factor, resilience loads on the fourth factor

[h] Email incivility, techno-invasion, work-life conflict, emotional exhaustion, and resilience load on different factors

and real estate activities (26.4%); professional, scientific, and technological activities (17.6%); information and communication (17.6%); human health and social work activities (13.0%); administrative and support service activities (11.8%); public administration (11.8%); accommodation and food service activities (0.6%); education (0.6%); transportation and storage (0.6%).

Measures

The same scales as those used in Study 1 were adopted to measure the extent to which participants were confronted with email incivility (14 items, Cyber-incivility Scale, Lim & Teo, 2009; α: 0.87) and experienced techno-invasion (4 items, Technostress Creators Scale, Ragu-Nathan et al., 2008; α: 0.85), work-life conflict (5 items, Work-family Conflict Scale, Netemeyer et al., 1996; α: 0.96), and emotional exhaustion (5 items, Maslach Burnout Inventory-General Survey, Maslach et al., 2001; α: 0.95). In addition, resilience was measured using the 10-item Connor-Davidson Resilience Scale (Campbell-Sills et al., 2007). Respondents indicated the extent to which they agreed with each statement regarding ways of handling problems and responding to stressful circumstances (e.g., *Under pressure, I am able to focus and think clearly*, α: 0.90) on a 5-point Likert scale (0 = *almost always false*, 4 = *almost always true*).

Results

Measurement reliability and confirmatory factor analysis

In a similar fashion to that of Study 1, we examined the psychometric properties of the study scales. There was no evidence of multicollinearity (VIF values ranged from 1.04 to 1.45; tolerance values ranged from 0.69 to 0.96). and the skewness (ranging from −0.38 to 1.18) and kurtosis values (ranging from −1.14 to 1.09) were appropriate. All factor loadings of items on their corresponding constructs were statistically significant and above the 0.5 cut-off points (i.e., email incivility: 0.50-0.79; techno-invasion: 0.82-0.92; work-life conflict: 0.88-0.95; emotional exhaustion: 0.83-0.94; resilience: 0.50-0.81). Moreover, the results showed that the composite reliability coefficients for the study variables ranged from 0.90 to 0.97. Likewise, all average variance extracted values for the study variables ranged from 0.51 to 0.86. All study scales had satisfactory internal consistencies showing Cronbach's alphas ranging from 0.85 to 0.96 (see Table 1).

As in Study 1, a CFA with the ML method was run to test the factor structure of the study variables. Again, to keep a favorable indicator-to-sample-size ratio, we

Table 3 Results of mediation model while controlling for covariates

ITALY (Study 1)

χ2	df	p	RMSEA	SRMR	CFI	TLI
144.39	84	0.00	0.06	0.05	0.96	0.94

Effects	B	S.E.	95% CI
CI→INV	0.27**	0.09	[0.10, 0.41]
INV→WLC	0.49***	0.09	[0.31, 0.62]
INV→Exhaustion	0.36***	0.09	[0.20, 49]
CI→WLC	0.18**	0.09	[0.01, 0.29]
CI→Exhaustion	0.30**	0.09	[0.12, 0.43]
Gender→INV	−0.04	0.08	[−0.17, 0.10]
Age→INV	0.01	0.09	[−0.15, 0.13]
Work hours→INV	0.07	0.10	[−0.10, 0.23]
Remote work→INV	−0.14*	0.08	[−0.27, −0.01]
Gender→WLC	0.17*	0.07	[0.07, 0.28]
Age→WLC	−0.02	0.07	[−0.14, 0.09]
Work hours→WLC	0.15	0.08	[0.02, 0.29]
Remote work→WLC	−0.01	0.07	[−0.14, 0.10]
Gender→Exhaustion	0.14	0.07	[0.02, 0.26]
Age→Exhaustion	−0.02	0.07	[−0.14, 0.10]
Work hours→Exhaustion	0.06	0.08	[−0.06, 0.20]
Remote work→Exhaustion	0.02	0.07	[−0.11, 0.13]
CI→INV→WLC	0.10*	0.05	[0.04, 0.18]
CI→INV→Exhaustion	0.13*	0.06	[0.05, 0.23]

UK (Study 2)

χ2	df	p	RMSEA	SRMR	CFI	TLI
134.53	84	0.00	0.04	0.04	0.98	0.98

Effects	B	S.E.	95% CI
CI→INV	0.27**	0.07	[0.16, 0.40]
INV→WLC	0.58***	0.05	[0.49, 0.66]
INV→Exhaustion	0.44***	0.06	[0.32, 53]
CI→WLC	0.11*	0.05	[0.02, 0.20]
CI→Exhaustion	0.21**	0.06	[0.10, 0.31]
Gender→INV	0.03	0.05	[−0.06, 0.11]
Age→INV	0.06	0.06	[−0.03, 0.15]
Work hours→INV	0.27***	0.07	[0.15, 0.38]
Remote work→INV	0.13**	0.05	[0.06, 0.20]
Gender→WLC	−0.01	0.05	[−0.08, 0.08]
Age→WLC	−0.05	0.05	[−0.14, 0.02]
Work hours→WLC	0.01	0.05	[−0.08, 0.10]
Remote work→WLC	−0.09	0.05	[−0.18, 0.01]
Gender→Exhaustion	−0.01	0.05	[−0.09, 0.07]
Age→Exhaustion	−0.14*	0.05	[−0.23, −0.04]
Work hours→Exhaustion	0.06	0.06	[−0.03, 0.16]
Remote work→Exhaustion	−0.14*	0.06	[−0.22,.−03]
CI→INV→WLC	0.12***	0.03	[0.08, 0.19]
CI→INV→Exhaustion	0.16***	0.04	[0.10, 0.24]

Note df = degree of freedom; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residuals; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index. CI = customer incivility; INV = techno-invasion; WLC = work-life conflict; Exhaustion = emotional exhaustion

*p < .05, **p < .01; Gender: 0 = male, 1 = female; Age: measured in years; Worked hours per week: measured in number of hours; Remote work: 0 = no, 1 = yes

created three parallel parcels for the latent constructs of email incivility, techno-invasion, work-life conflict, emotional exhaustion, and resilience to save degrees of freedom. The expected five-factor model outperformed all alternative models, yielding a very satisfactory fit (see Table 2). These results support the distinctiveness of the substantive variables. As in Study 1, we conducted

Harman's single-factor test. The results indicated that the first factor explained the 40.80% of variance without rotation, suggesting that common method bias did not seem to substantially affect our study.

Hypotheses testing

As in Study 1, we conducted a mediation analysis with the ML method, using the bootstrapping test and a bias-corrected 95% CI with a resampling procedure of 1,000 bootstrap samples. In our expected model (see Table 3), email incivility was positively related to techno-invasion ($\beta = 0.27$, $p < .01$, 95% CI [0.16, 0.40]) which, in turn, was positively related to work-life conflict ($\beta = 0.58$, $p < .001$, 95% CI [0.49, 0.66]) and positively associated with emotional exhaustion ($\beta = 0.44$, $p < .001$, 95% CI [0.32, 0.53]). Email incivility was positively and directly related to work-life conflict ($\beta = 0.11$, $p < .05$, 95% CI [0.02, 0.20]) and emotional exhaustion ($\beta = 0.21$, $p < .01$, 95% CI [0.10, 0.31]). Moreover, techno-invasion partially mediated the relationship between email incivility and work-life conflict ($\beta = 0.12$, $p < .001$, 95% CI [0.08, 0.19]). Likewise, techno-invasion partially mediated the relationship between email incivility and emotional exhaustion ($\beta = 0.16$, $p < .001$, 95% CI [0.10, 0.24]).

In Study 2, we also aimed to investigate the moderating role of resilience in the previous mediation model. To this aim, we added a moderator variable (i.e., resilience) to our previous mediation model. The results of the subsequent moderated mediation model (see Table 4; Fig. 2) indicated that resilience moderated the association between email incivility and techno-invasion. The interaction effect was negative ($\beta = -0.35$, $p < .05$, 95% CI [-0.62, -0.07]) suggesting that resilience protected against the negative effects of email incivility in terms of techno-invasion and then both work-life conflict and emotional exhaustion. When confronted with email incivility, workers who scored low ($\beta = 0.92$, $p < .001$, 95% CI [0.55, 1.30]) and moderate ($\beta = 0.60$, $p < .01$, 95% CI [0.30, 0.90]) on resilience were more likely to experience techno-invasion and then work-life conflict, unlike high-resilient workers for whom the indirect effect was nonsignificant ($\beta = 0.28$, ns, 95% CI [-0.14, 0.70]). Likewise, when exposed to email incivility, workers who scored low ($\beta = 0.68$, $p < .001$, 95% CI [0.39, 0.97]) and moderate ($\beta = 0.44$, $p < .01$, 95% CI [0.21, 0.67]) on resilience were more likely to experience techno-invasion and then emotional exhaustion, unlike high-resilient workers for whom the indirect effect was nonsignificant ($\beta = 0.20$, ns, 95% CI [-0.11, 0.52]).

Table 4 Path coefficients and conditional effects for the moderated mediation model (Study 2)

Paths	Effects		
	B	S.E.	95%CI
Email incivility → Techno-invasion	0.64***	0.19	[0.33, 0.96]
Resilience → Techno-invasion	−0.04	0.06	[-0.14, 0.05]
Email incivility * Resilience → Techno-invasion	−0.35*	0.16	[-0.62, −0.07]
Techno-invasion → WLC	0.93***	0.09	[0.78, 1.09]
Techno-invasion → Exhaustion	0.69***	0.09	[0.53, 0.84]
Email incivility → WLC	0.51*	0.25	[0.09, 0.93]
Email incivility → Exhaustion	0.99***	0.27	[0.55, 1.44]
Gender→ Techno-invasion	0.04	0.11	[-0.14, 0.22]
Age→ Techno-invasion	0.01	0.01	[-0.01, 0.01]
Work hours→ Techno-invasion	0.06***	0.01	[0.04, 0.08]
Remote work→ Techno-invasion	0.43*	0.17	[0.16, 0.70]
Gender→ WLC	−0.02	0.15	[-0.27, 0.23]
Age→ WLC	−0.01	0.01	[-0.02, 0.04]
Work hours→ WLC	0.00	0.02	[-0.03, 0.03]
Remote work→ WLC	−0.45	0.23	[-0.83, −0.07]
Gender→ Exhaustion	−0.04	0.16	[-0.30, 0.21]
Age→ Exhaustion	−0.02**	0.01	[-0.03, −0.01]
Work hours→ Exhaustion	0.02	0.02	[-0.01, 0.05]
Remote work→ Exhaustion	−0.66**	0.24	[-1.05, −0.27]
Email incivility *Low levels of resilience→ Techno-invasion→ WLC	0.92***	0.23	[0.55, 1.30]
Email incivility *Moderate levels of resilience→ Techno-invasion→ WLC	0.60**	0.18	[0.30, 0.90]
Email incivility *High levels of resilience→ Techno-invasion→ WLC	0.28	0.26	[-0.14, 0.70]
Email incivility *Low levels of resilience→ Techno-invasion→ Exhaustion	0.68***	0.18	[0.39, 0.97]
Email incivility *Moderate levels of resilience→ Techno-invasion→ Exhaustion	0.44**	0.14	[0.21, 0.67]
Email incivility *High levels of resilience→ Techno-invasion→	0.20	0.19	[-0.11, 0.52]
Index of moderated mediation (WLC)	−0.32*	0.16	[-0.58, −0.06]
Index of moderated mediation (Exhaustion)	−0.24*	0.12	[-0.43, −0.04]

Note WLC = work-life conflict; Exhaustion = emotional exhaustion
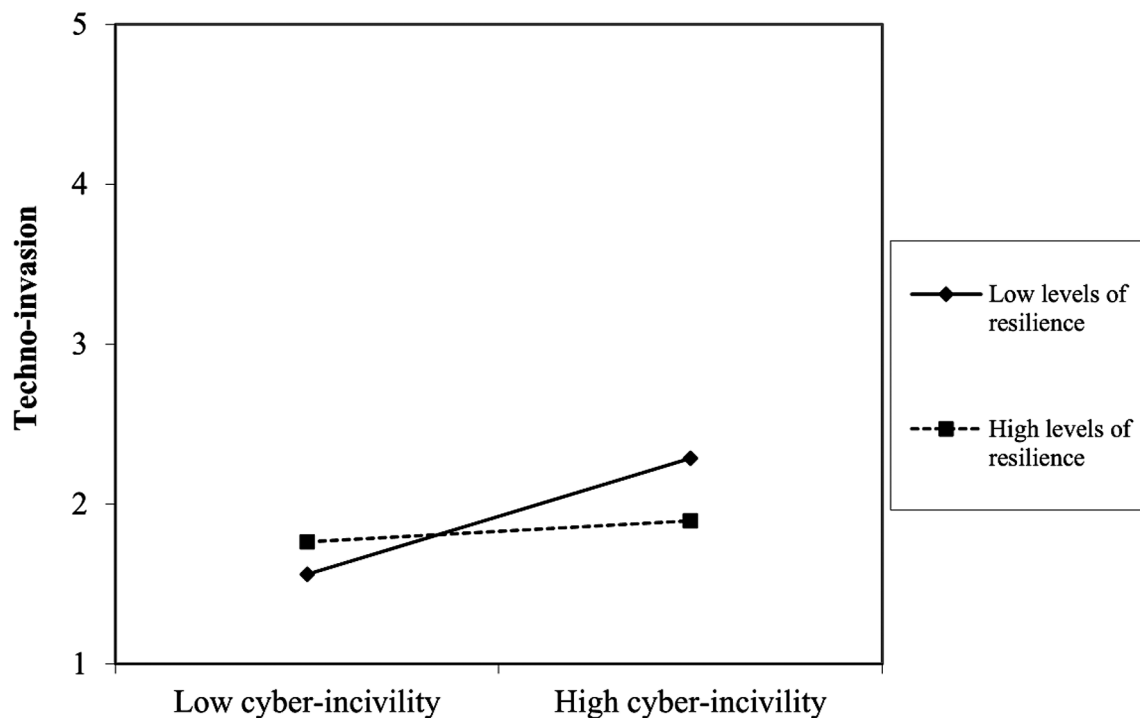
*$p < .05$, **$p < .01$

Fig. 2 Moderating effect of resilience in the relationship between email incivility and techno-invasion (Study 2)

Discussion

These empirical studies tested whether, how, and under which personal conditions email incivility from colleagues is associated with employees' emotional exhaustion and work-life conflict. In two countries, we replicated the same findings showing that techno-invasion is a psychological mechanism explaining how email incivility can be conducive to emotional exhaustion and work-life conflict during the pandemic and post-pandemic times. Moreover, in Study 2, we provided evidence for the protective role of resilience against the detrimental effects of email incivility in terms of techno-invasion and then emotional exhaustion, and work-life conflict. Overall, the results provide further empirical evidence for the harmful effects of email incivility from colleagues and its spillover effects on the private life domain, shedding light on how and when these may occur.

Theoretical contributions

The present study offers three main theoretical contributions. First, by demonstrating that email incivility from colleagues is associated with emotional exhaustion and work-life conflict, this study adds to the limited but increasing body of research on the costs of cyber incivility from colleagues and answers the call for more research on the spillover effects of workplace incivility on non-work domains (Park et al., 2018). In line with the COR theory,

the resource depletion associated with email incivility may negatively affect employees' available resources to meet work and non-work demands and motivate them to scale back their resource investments to protect their remaining resources. In such a situation, employees may not only suffer from feelings of being worn out by their work, but also spillover effects in the private life domain may occur in the form of work-life conflict. This is in line with spillover theory which states that an individual's experiences in the work domain can flow into the non-work domain (Bernuzzi et al., 2022a, b). This study then contributes to the growing body of research analysing the spillover effects of interpersonal stressors from work to non-work domains (e.g., Shah & Huang, 2023), expanding the current knowledge on the relationship between email incivility and work-life conflict.

Second, this study moves a step forward in the cyber incivility and technostress literature as it is the first to identify techno-invasion as a psychological mechanism explaining how email incivility from colleagues is linked to feelings of emotional exhaustion and work-life conflict experiences among affected employees. This is in line with previous research showing that techno stressors related to the private life domain as afforded by technologies are likely to produce distress in the same domain as the intrusiveness of ICT technologies generates incompatible differences between what an individual is expected to do during non-working time, and the job demands as mediated via technology (e.g., via mobile email), compromising

employees' capabilities to recover their lost resources (Demsky et al., 2019; Park et al., 2018). In line with the COR theory (Hobfoll et al., 2018), whether employees continue to be affected by resource losses without being able to successfully counterbalance via the adoption of proper conservation of resources strategies (e.g., as mobile email blurs the work-life boundaries, employees may have difficulties in disconnecting from uncivil emails), they may further deplete their resources (Lim et al., 2018; Sommovigo et al., 2020). As their resource reservoirs become depleted, techno-invasion-related demands may exceed employees' coping resources and distract them from investing time and energy in the private life domain (Harris et al., 2022). Employees may then feel emotionally exhausted and under-resourced to handle effectively competing demands from different life domains, experiencing work-life conflict (Bernuzzi et al., 2022a). By unveiling the mediating role of techno-invasion in the link between email incivility and employees' well-being and work-life interface, this study extends our understanding of this specific techno-stressor confirming its potential to spill over into the non-work domain.

Third, to our knowledge, this is the first study to support the protective role of resilience against techno-invasion experienced by victims of email incivility. Drawing on the COR theory (Hobfoll et al., 2018), resilience represents a personal coping resource that enables employees to perceive ambiguous interpersonal situations (i.e., email incivility) as a challenge, easily use the resources available to proactively prepare themselves to cope with such situations in a highly adaptive way (Singh et al., 2022). Thus, given their tendency to have a sense of control over their life and positive reframing skills, resilient employees are able to reappraise demanding situations (i.e., email incivility) in an optimistic way, which facilitates adaptive and flexible problem-solving (Bernuzzi et al., 2022a, b; Trent & Allen, 2019). As a result, resilient employees are better equipped to effectively replenish lost resources (e.g., detachment and recovery experiences) and reach a balanced use of work-related ICT technologies, being less likely to perceive techno-invasion and thus maintain adequate resources to meet work and non-work demands (De Clercq & Belausteguigoitia, 2023). This finding is in line with previous studies showing that personal characteristics may shape the extent to which individuals perceive interpersonal breaches as incivility and resilience buffers the detrimental effects of face-to-face workplace incivility on individuals' work-related (Sommovigo et al., 2019) and well-being outcomes (Trent & Allen, 2019). By identifying resilience as a protective factor against techno-invasion related to email incivility, this study deepens our understanding of the personal boundary conditions shaping the detrimental effects of email incivility, adding to

the literature on individual differences in cyber incivility perceptions.

Practical implications

From a practical standpoint, organizations should take steps to prevent email incivility from occurring in the first place. Establishing "netiquette" codes to provide staff with clear rules on what email communication is appropriate (i.e., the acceptable window to return an email before a follow-up is needed) may be effective in decreasing the occurrence of email incivility. Moreover, organizations could benefit from providing their supervisors with awareness programs on the costs of email incivility for employee well-being and work-life interface so that they can become role models for civil communications at work. Supervisors could also be trained on how to address episodes of email incivility, being appointed as contact persons to whom victims of email incivility may refer to get appropriate support. Furthermore, workplace civility workshops and cultural change initiatives, such as Civility, Respect, and Engagement in the Workplace (CREW) programs, could be helpful tools to promote respectful behaviors among colleagues (Sawada et al., 2021). These initiatives could be combined with electronic media norms training and interactive activities on how to write civil emails (Gabbiadini et al., 2023). Alternatively, companies could consider incorporating the topics of email incivility into their formal staff training programs.

Since email incivility can spill over into victims' private life through techno-invasion, companies could provide their staff with techno-effectiveness and email management training to teach them how to healthy use ICT technologies. These programs could also be integrated with training initiatives aimed at fostering employees' recovery and coping skills to set work-home boundaries. Additionally, the management could consider establishing clear company guidelines about email response times and family-friendly practices concerning disconnection during non-working times to ensure their employees' right to disconnect is respected. Finally, given the protective role of resilience against the detrimental effects of email incivility, employees could benefit from psychological resilience training (Joyce et al., 2018). Organizations could also consider introducing psychological support programs to support victims of email incivility.

Limitations and future research directions

This study is subject to some limitations that may provide helpful suggestions for future research. The data were collected using a cross-sectional design, preventing causal links between variables from being established. Additionally, we

used self-report measures only, making our study sensitive to common method bias. Replications should be conducted using longitudinal designs and integrating self-reports with other forms of data (e.g., work-life conflict reported by partners). Such replications should include variables that would facilitate reaching a deeper understanding of the mechanisms through which, and the boundary conditions under which, email incivility may affect employees' well-being and work-life conflict. For instance, although our results emphasize the relevance of COR's resource loss processes in explaining the effects of email incivility, this study did not include measures of such processes. Future investigations could then include these variables to test more complex moderated mediation models that would help reach a better understanding of how and when email incivility can result in employees' emotional exhaustion and work-life conflict. To this aim, future investigations could consider adopting a multi-level approach by gathering data at the individual, group, and system levels. Adopting this approach could allow the examination of, for example, whether firm-level factors might be conducive to a certain team (in-)civility climate that could trigger versus prevent an individual's email incivility responses. Finally, this study was limited to the focus on email incivility from colleagues. To guide the design of more tailored interventions, future research might contribute to broadening the comprehension of email incivility by comparing its effects with those from face-to-face incivility, by distinguishing between different types of cyber incivility, from diverse sources, and by disentangling their specific or incremental effects on employees' well-being and work-life conflict.

Conclusion

Although the present cross-sectional study relied merely on self-report measures, it was replicated in two countries during the pandemic and post-pandemic times, and it addressed some gaps in the cyber-incivility literature by providing new insights on how and when email incivility from colleagues can be related to employees' emotional exhaustion and work-life conflict. These studies then move the cyber incivility and techno-stress literature a step forward as it is the first to identify techno-invasion as a psychological mechanism linking email incivility to employees' well-being and work-life interface and resilience as a personal boundary condition under which the detrimental effects of email incivility are less likely to occur, thereby offering new practical insights on how to prevent employees from experiencing such harmful effects. We conclude with the hope that our contribution will encourage future multi-level and longitudinal research on mediating and moderating factors associated with email incivility effects to gather a deeper understanding of this increasingly widespread phenomenon.

Declarations

References

Anjum, M. A., Liang, D., Durrani, D. K., & Parvez, A. (2022). Workplace mistreatment and emotional exhaustion: The interaction effects of self-compassion. *Current Psychology*, *41*, 1460–1471. https://doi.org/10.1007/s12144-020-00673-9.

Bauwens, R., Denissen, M., Van Beurden, J., & Coun, M. (2021). Can leaders prevent technology from backfiring? Empowering leadership as a double-edged sword for technostress in care. *Frontiers in Psychology*, *12*, 702648. https://doi.org/10.3389/fpsyg.2021.702648.

Bernuzzi, C., Setti, I., Maffoni, M., & Sommovigo, V. (2022a). From moral distress to burnout through work-family conflict: The protective role of resilience and positive refocusing. *Ethics &*

Behavior, *32*(7), 578–600. https://doi.org/10.1080/10508422.2021.1955682.

Bernuzzi, C., Sommovigo, V., & Setti, I. (2022b). The role of resilience in the work-life interface: A systematic review. *Work (Reading, Mass.)*, *73*(4), 1147–1165. https://doi.org/10.3233/WOE-20523.

Borgogni, L., Galati, D., & Petitta, L. (2005). *Il Questionario Checkup Organizzativo. Manuale Dell'adattamento Italiano*. Organizzazioni Speciali.

Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, *20*(6), 1019–1028. https://doi.org/10.1002/jts.20271.

Colombo, L., & Ghislieri, C. (2008). The work-to-family conflict: Theories and measures. *Work (Reading, Mass.)*, *15*(1), 35–55.

Cortina, J. M., Aguinis, H., & DeShon, R. P. (2017). Twilight of dawn or of evening? A century of research methods in the Journal of Applied psychology. *Journal of Applied Psychology*, *102*(3), 274–290. https://doi.org/10.1037/apl0000163.

De Clercq, D., & Belausteguigoitia, I. (2023). When do ruminations about life-threatening crises threaten Creativity? The critical role of Resilience. *Creativity Research Journal*, 1–17. https://doi.org/10.1080/10400419.2023.2205702.

Demsky, C. A., Fritz, C., Hammer, L. B., & Black, A. E. (2019). Workplace incivility and employee sleep: The role of rumination and recovery experiences. *Journal of Occupational Health Psychology*, *24*(2), 228–240. https://doi.org/10.1037/ocp0000116.

Gabbiadini, A., Paganin, G., & Simbula, S. (2023). Teaching after the pandemic: The role of technostress and organizational support on intentions to adopt remote teaching technologies. *Acta Psychologica*, *236*, 103936. https://doi.org/10.1016/j.actpsy.2023.103936.

Harris, K. J., Harris, R. B., Valle, M., Carlson, J., Carlson, D. S., Zivnuska, S., & Wiley, B. (2022). Technostress and the entitled employee: Impacts on work and family. *Information Technology & People*, *35*(3), 1073–1095. https://doi.org/10.1108/ITP-07-2019-0348.

He, Y., Walker, J. M., Payne, S. C., & Miner, K. N. (2021). Explaining the negative impact of workplace incivility on work and non-work outcomes: The roles of negative rumination and organizational support. *Stress and Health*, *37*(2), 297–309. https://doi.org/10.1002/smi.2988.

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640.

Joyce, S., Shand, F., Tighe, J., Laurent, S. J., Bryant, R. A., & Harvey, S. B. (2018). Road to resilience: A systematic review and meta-analysis of resilience training programmes and interventions. *British Medical Journal Open*, *8*(6), e017858. https://doi.org/10.1136/bmjopen-2017-017858.

Lim, V. K., & Teo, T. S. (2009). Mind your E-manners: Impact of cyber incivility on employees' work attitude and behavior. *Information & Management*, *46*(8), 419–425. https://doi.org/10.1016/j.im.2009.06.006.

Lim, S., Ilies, R., Koopman, J., Christoforou, P., & Arvey, R. D. (2018). Emotional mechanisms linking incivility at work to aggression and withdrawal at home: An experience-sampling study. *Journal of Management*, *44*(7), 2888–2908. https://doi.org/10.1177/0149206316654544.

Little, T. D. (2013). *Longitudinal structural equation modeling*. Guilford Press.

Ma, J., Ollier-Malaterre, A., & Lu, C. Q. (2021). The impact of technostressors on work–life balance: The moderation of job self-efficacy and the mediation of emotional exhaustion. *Computers in Human Behavior*, *122*, 106811. https://doi.org/10.1016/j.chb.2021.106811.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*(1), 397–422. https://doi.org/0.1146/annurev.psych.52.1.397.

McCarthy, K., Pillai, R., Cherry, B., & Steigerwald, M. (2019). From cyber to email incivility: A psychometric assessment and measure validation study. *Organization Management Journal*, *16*(2), 61–68. https://doi.org/10.1080/15416518.2019.1604198.

Molino, M., Ingusci, E., Signore, F., Manuti, A., Giancaspro, M. L., Russo, V., & Cortese, C. G. (2020). Wellbeing costs of technology use during Covid-19 remote working: An investigation using the Italian translation of the technostress creators scale. *Sustainability*, *12*(15), 5911. https://doi.org/10.3390/su12155911.

Montani, F., Setti, I., Sommovigo, V., Courcy, F., & Giorgi, G. (2020). Who responds creatively to role conflict? Evidence for a curvilinear relationship mediated by cognitive adjustment at work and moderated by mindfulness. *Journal of Business and Psychology*, *35*, 621–641. https://doi.org/10.1007/s10869-019-09644-9.

Nag, D., Jones, K. P., Lindsey, A. P., Robinson, A. N., & Arena, D. F. Jr. (2023). A theoretical model of selective cyber incivility: Exploring the roles of perceived informality and perceived distance. *Human Resource Management Journal*. https://doi.org/10.1111/1748-8583.12477.

Nguyen, N., & Besson, T. (2023). I do not want to smile! A response to customer mistreatment. *Current Psychology*, *42*, 317–326. https://doi.org/10.1007/s12144-021-01443-x.

Park, Y., & Haun, V. C. (2018). The long arm of email incivility: Transmitted stress to the partner and partner work withdrawal. *Journal of Organizational Behavior*, *39*(10), 1268–1282. https://doi.org/10.1002/job.2289.

Park, Y., Fritz, C., & Jex, S. M. (2018). Daily cyber incivility and distress: The moderating roles of resources at work and home. *Journal of Management*, *44*(7), 2535–2557. https://doi.org/10.1177/0149206315576796.

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, *19*(4), 417–433. https://doi.org/10.1287/isre.1070.0165.

Sawada, U., Shimazu, A., Kawakami, N., Miyamoto, Y., Speigel, L., & Leiter, M. P. (2021). The effects of the civility, respect, and engagement in the workplace (crew) program on social climate and work engagement in a psychiatric ward in Japan: A pilot study. *Nursing Reports*, *11*(2), 320–330. https://doi.org/10.3390/nursrep11020031.

Shah, S. J., & Huang, C. (2023). Venting out violence exposure: Nurses' resource replenishment causes the life-partner to deplete. *Current Psychology*, 1–11. https://doi.org/10.1007/s12144-023-04517-0.

Shahwar, D., & Dhar, R. L. (2023). Unravelling the mysteries of cyber incivility: A systematic review and research agenda. *International Journal of Conflict Management*. https://doi.org/10.1108/IJCMA-06-2023-0115.

Singh, P., Bala, H., Dey, B. L., & Filieri, R. (2022). Enforced remote working: The impact of digital platform-induced stress and remote working experience on technology exhaustion and subjective wellbeing. *Journal of Business Research*, *151*, 269–286. https://doi.org/10.1016/j.jbusres.2022.07.002.

Sliter, M., Sliter, K., & Jex, S. (2012). The employee as a punching bag: The effect of multiple sources of incivility on employee withdrawal behavior and sales performance. *Journal of Organizational Behavior*, *33*(1), 121–139. https://doi.org/10.1002/job.767.

Sommovigo, V., Setti, I., & Argentero, P. (2019). The role of service providers' resilience in buffering the negative impact of customer

incivility on service recovery performance. *Sustainability*, *11*(1), 285. https://doi.org/10.3390/su11010285.

Sommovigo, V., Setti, I., O'Shea, D., & Argentero, P. (2020). Investigating employees' emotional and cognitive reactions to customer mistreatment: An experimental study. *European Journal of Work and Organizational Psychology*, *29*(5), 707–727. https://doi.org/10.1080/1359432X.2020.1745189.

Sommovigo, V., Bernuzzi, C., & Setti, I. (2022). Helping others not always helps ourselves: The relationship between victim incivility and emergency workers' burnout through work-to-family conflict. *International Journal of Workplace Health Management*, *15*(4), 467–492. https://doi.org/10.1108/IJWHM-09-2021-0183.

Sommovigo, V., Carnevali, L., Ottaviani, C., Rosa, V., Filosa, L., Borgogni, L., & Alessandri, G. (2023). The dynamic associations of interpersonal conflicts at work and consequent negative emotion dynamics with diurnal cortisol variations. *Journal of Occupational Health Psychology* (in press).

Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, *17*(2), 268–274. https://doi.org/10.1111/j.1365-2753.2010.01434.x.

Tasoulis, K., Theriou, G., Louzi, N., & Chatzoudes, D. (2023). Scylla and Charybdis: The relationships between supervisor active and passive cyber incivility with job stress, work engagement, and turnover intentions. *European Management Journal*. https://doi.org/10.1016/j.emj.2023.10.002.

The Radicati Group Inc (2022). *Email statistics report 2022–2026* https://www.radicati.com/?p=17936.

Trent, S. B., & Allen, J. A. (2019). Resilience only gets you so far: Volunteer incivility and burnout. *Organization Management Journal*, *16*(2), 69–80. https://doi.org/10.1080/15416518.2019.1604199.

Walter, S. L., Seibert, S. E., Goering, D., & O'Boyle Jr, E. H. (2022). A tale of two sample sources: Do results from online panel data and conventional data converge? *Key topics in Consumer Behavior* (pp. 75–102). Springer Nature Switzerland.

Wang, Y. (2022). Understanding the role of social factors in cyberbullying at work. *Computers in Human Behavior*, *134*, 107325. https://doi.org/10.1016/j.chb.2022.107325.

Wang, X., Kim, T. Y., & Li, H. (2022). Why and for whom cyber incivility affects task performance? Exploring the intrapersonal processes and a personal boundary condition. *Asia Pacific Journal of Management*, 1–26. https://doi.org/10.1007/s10490-022-09865-2.

Xiao, S. P., Lu, Y., Yan, Y., Zhou, Z. E., Cao, Z. X., & Zhao, K. C. (2023). Effects of two-dimensional cyber incivility on employee well-being from a self-determination perspective. *Frontiers in Psychology*, *14*, 1137587. https://doi.org/10.3389/fpsyg.2023.1137587.

Yuan, Z., Park, Y., & Sliter, M. T. (2020). Put you down versus tune you out: Further understanding active and passive email incivility. *Journal of Occupational Health Psychology*, *25*(5), 330–344. https://doi.org/10.1037/ocp0000215.