



Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

“On the roots of interpersonal strain at work: The role of burnout and social self-efficacy”

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ARTICLE INFO

Keywords:

Burnout
Emotional impairment
Interpersonal strain
Social self-efficacy

ABSTRACT

This study questions whether interpersonal strain at work (i.e., a measure of disengagement and withdrawal from others) is an outcome of burnout rather than a core facet of the syndrome by adopting the Burnout Assessment Tool (BAT) framework (Schaufeli et al., 2020). The BAT distinguishes between core (i.e., exhaustion, mental distance, emotional and cognitive impairment) and secondary symptoms. In doing so, the study conceptualizes a process in which individual differences in one's beliefs about nurturing and capitalizing from social relationships in the workplace (i.e., social self-efficacy) and the burnout symptom of emotional impairment (i.e., deterioration of self-regulatory control on negative emotions) operate in concert in determining interpersonal strain. To test our predictions, a two-wave study using a sample of 346 white collar workers from a government agency was designed. Results revealed that, among the core burnout symptoms, emotional impairment predicted unique variance in interpersonal strain at work after two years. Furthermore, social self-efficacy beliefs were associated with a significant decrease in emotional impairment, which, in turn, mediated the longitudinal relation between social self-efficacy and interpersonal strain. Theoretical and practical implications of our results, as well as the limitations of our study, are discussed.

1. Introduction

Burnout is a multidimensional stress syndrome stemming from persistent exposure to unresolvable work stressors (Bianchi et al., 2020), of which the framework recently proposed by Schaufeli et al. (2020) represents the most advanced conceptualization and measurement to date. Specifically, such a framework disentangled the four core impairments of burnout (i.e., energetic, motivational, emotional, and cognitive). In line with previous literature, burnout encompasses the key experiences of exhaustion (i.e., inability to perform the job), and a growing mental distance (i.e., unwillingness to invest effort). Additionally, Schaufeli et al. (2020) acknowledged emotional impairment (i.e., reduced capability in regulating negative emotions like sadness and anger) and cognitive impairment (i.e., reduced capability to manage cognitive executive functions like concentration and memory) as core symptoms. These new dimensions clarify the emotional and cognitive self-regulation problems that were previously subsumed by exhaustion (Shirom, 2005). Furthermore, psychosomatic problems, psychological distress, and depressed mood have been conceptualized as secondary

symptoms given their co-occurrent yet atypical nature within the syndrome (Schaufeli et al., 2020). The Burnout Assessment Tool (BAT), designed to measure this conceptual framework, has garnered substantial empirical support worldwide, with scholars starting to investigate its diagnostic utility in estimating burnout risk especially among European workers for prevention and treatment purposes (Schaufeli et al., 2023). The BAT in fact offers the advantage of providing both a composite burnout score and a granular assessment of the syndrome's specific symptoms (Hadžibajramović et al., 2022; Mazzetti et al., 2022; Schaufeli et al., 2020).

However, consensus and research on the nature of interpersonal impairments associated with burnout are still scant. On the one hand, depersonalization (i.e., detached and dehumanized treatment of recipients) posed measurement problems when applied beyond service professions (Schaufeli & Taris, 2005), thus leading to its exclusion from the burnout spectrum. Indeed, Schaufeli and Taris (2005) argued that depersonalization does not prototypically characterize the syndrome's phenomenology for all individuals in all occupational contexts. On the other hand, Borgogni et al. (2012) introduced and validated

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<https://doi.org/10.1016/j.paid.2024.112825>

Received 3 January 2024; Received in revised form 3 June 2024; Accepted 26 July 2024

Available online 31 July 2024

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interpersonal strain at work as a core facet of the syndrome, namely, the self-protective responses to exceeding social demands and pressures, such as feelings of discomfort and frustration, as well as withdrawal. However, with similar rates to secondary symptoms, [Tavella and Parker \(2020\)](#) recently reported that 25.3 % of burned-out employees experience social withdrawal at work and home.

While the understanding of the association between burnout and interpersonal strain remains limited, few studies suggested that the emotional depletion characteristic of burnout, stemming from work-related stressors, can lead to detachment and withdrawal from others as a dysfunctional coping strategy ([Mäkikangas et al., 2021](#); [Taris et al., 2005](#)). In this regard, the literature has also endorsed that negative affect and the individual's regulatory capability are crucial in understanding the development of interpersonal (mal)adjustment in the workplace (e.g., [Hershcovis et al., 2007](#); [Kaplan et al., 2009](#)) and at home ([Pluut et al., 2022](#)). Notably, burnout has been linked to biases in emotion recognition and regulation in experimental settings, including increased fixation on and recall of negative affective stimuli as well as hypersensitivity to interpersonal rejection ([Bianchi et al., 2015, 2018, 2020](#)). These biases have consistently been found to underpin interpersonal maladjustment in both youth and adulthood, along with overt irritability and diminished responsiveness to social rewards and perspective-taking (e.g., [Coplan et al., 2021](#); [Kupferberg et al., 2016](#)). In this sense, the lower functionality of one's emotional processes may expose employees to more aversive experiences in social interactions, easing withdrawal from others as a response. Thus, the first aim of this study is to explore whether, within the BAT framework, emotional impairment, among the other burnout core symptoms, may play a unique role in the onset of interpersonal strain.

Furthermore, prior evidence found that interpersonal strain is strongly reflective of individual differences in how one perceives and reacts to social relationships ([Borgogni et al., 2012](#); [Santarpià et al., 2024](#)). In this regard, literature has extensively associated self-efficacy (i.e., beliefs about one's capability to perform the required actions to achieve specific outcomes) with burnout reduction ([Shoji et al., 2016](#)) through task-focused ([Loeb et al., 2016](#)) or composite measures ([Consiglio et al., 2013](#)). Instead, we know still little about the specific contribution of social self-efficacy to burnout and interpersonal strain.

Social self-efficacy reflects individuals' confidence in their capability to nurture and capitalize on high-quality interpersonal relationships ([Loeb et al., 2016](#)). Employees with high social self-efficacy are more likely to successfully participate in social groups and interact with clients ([Fan et al., 2013](#)) and engage more in prosocial behaviors at work (e.g., helping and supporting others; [Alessandri et al., 2021](#)), thus exhibiting a functioning pattern naturally opposed to that of interpersonal strain.

Effective social relationships provide a safe space for emotional expression and regulation ([Feeney & Collins, 2015](#)), supporting the employee's psychophysiological resilience to adjust to environmental stressors in the work context ([Heaphy & Dutton, 2008](#); [Santarpià et al., 2023](#)). Indeed, drawing on [Fan et al. \(2013\)](#), social self-efficacy may increase positive emotional reactions in social interactions at work as well as help employees to capitalize from the available emotional supplies provided by others in understanding and managing one's own negative emotions, ultimately alleviating interpersonal stress. Thus, the second aim of this study is to examine whether higher social self-efficacy may lower emotional impairment, thus leveraging employees' emotional regulatory capabilities through social harmony and reciprocity. Furthermore, given that individual differences in managing social interactions and emotions synergistically influence interpersonal adjustment ([Alessandri et al., 2021](#); [Caprara et al., 2012](#)), the third aim of this study is to investigate whether, by lowering emotional impairment, social self-efficacy may indirectly reduce interpersonal strain.

To achieve our aims, the present study adopted a two-wave cross-lagged mediational design with a 24-month time lag. Specifically, we developed and tested a conceptual model predicting that, over time,

social self-efficacy is negatively associated with emotional impairment, which (hypothesis 1), in turn, is positively related to interpersonal strain at work (hypothesis 2). Thus, emotional impairment is expected to mediate the relationship between social self-efficacy and interpersonal strain over time (hypothesis 3).

2. Method

2.1. Sample and procedure

The study was conducted via an online and anonymous self-report questionnaire in a large Italian government agency, which invited all of its employees to voluntarily participate in the research. Data at Time 1 (T1) was collected in January 2020, before the COVID-19 pandemic, while data at Time 2 (T2) was collected two years later (January 2022), when Italy was no longer in a state of acute emergency. This time lag was informed by the methodology employed in prior studies on burnout development (see [Mäkikangas et al., 2021](#)). Participants' longitudinal data was associated through a self-generated code, adhering to the ethical standards of the American Psychological Association and the Declaration of Helsinki. The sample comprised 346 white-collar workers who completed both assessments (retention rate: 39.5 %). Drop-outs are quite common in longitudinal research. However, a series of one-way ANOVAs showed that participants included only at T1 and those who remained at T2 did not significantly differ on any of the study variables. The participants were evenly distributed in terms of sex (52 % females). The most represented groups were 40–49 years old (34.9 %) for age and 5–10 years (34.1 %) for organizational tenure. The 22.8 % of participants interacted with customers on a daily basis.

An a priori calculation of the required sample size for testing our conceptual model was performed using G*Power 3.1 for the direct paths and the Monte Carlo method with 10,000 replications for the indirect effect, assuming a two-sided significance level of 0.05 and a power of 0.80 ([Faul et al., 2009](#); [Schoemann et al., 2017](#)). According to our results, a minimum of 67 subjects is required to test the social self-efficacy-burnout link, based on the average effect size of |0.33| found in the relationship between self-efficacy and burnout (reported in [Shoji et al.'s, 2016](#) meta-analysis). A minimum of 266 subjects is required to test the burnout-interpersonal strain link, using an average effect of |0.17| derived from [Taris et al.'s \(2005\)](#) study concerning the sequential development of burnout symptoms, as it is the most similar in design to ours. Finally, a minimum of 313 subjects are necessary for estimating the indirect effect of social self-efficacy on interpersonal strain.

2.2. Measures

2.2.1. Social self-efficacy

Social self-efficacy (3 items; [Alessandri et al., 2021](#)) assessed individual beliefs about one's own capability to nurture and capitalize from social relationships at work (e.g., "At work, I believe I am capable of earning the trust of others even in a climate of diffidence"). All items were measured on a Likert-scale from 1 (*not capable at all*) to 7 (*fully capable*).

2.2.2. Burnout Assessment Tool (BAT)

We employed the short version of the BAT to assess the core symptoms of burnout ([Hadžibajramović et al., 2022](#); [Mazzetti et al., 2022](#)). Emotional impairment (3 items) assessed the reduced functional regulation of negative emotional experiences (e.g., "At work, I may overreact unintentionally"). Exhaustion (3 items) assessed a loss of physical and mental energy (e.g., "At work, I feel mentally exhausted"). Mental Distance (3 items) assessed a motivational detachment from the job (e.g., "I struggle to find any enthusiasm for my work"). Cognitive Impairment (3 items) assessed the reduced functional regulation of cognitive executive functions (e.g., "At work, I have trouble staying focused"). All items were measured on a Likert-scale from 1 (*never*) to 7 (*always*).

2.2.3. Interpersonal strain at work

Interpersonal Strain at Work (5 items; Borgogni et al., 2012), assessed the frequency of feelings, behaviors and attitudes of interpersonal disengagement and withdrawal (e.g., “At work, I find myself to be insensitive to other people’s problems”). All items were measured on a Likert-scale from 1 (never) to 7 (always).

2.3. Data analyses

A two-wave cross-lagged design was employed in order to test our theoretical model (Cole & Maxwell, 2003), using the maximum likelihood (ML) estimator in Mplus 8.1 (Muthén & Muthén, 2017). Cross-lagged paths were controlled for autoregressive paths to account for the stability of the variables, such as sex, age, organizational tenure, and customer contact. Preliminary, we evaluated the psychometric properties of our scales and their correlations. Then, we estimated the regression coefficients of the BAT core symptoms at T1 as predictors of interpersonal strain at T2. This analysis assessed whether emotional impairment had a significant predictive power on interpersonal strain over the other components of the BAT. Then, we tested the hypothesized model’s configural and metric invariance across T1 and T2 (Kline, 2016). At each step of invariance, the model’s goodness of fit was evaluated with (1) the chi-square statistic (χ^2 ; Kline, 2016), (2) values of CFI higher than 0.90, (3) RMSEA values lower than 0.08 and (4) SRMR values lower than 0.08 (Browne & Cudeck, 1992). Measurement invariance was assessed through model differences in the chi-square statistic ($\Delta\chi^2$; Kline, 2016) and in the comparative fit index (ΔCFI) with values lower than |0.01|, paired with changes in RMSEA of |0.015| and SRMR of |0.030| (Putnick & Bornstein, 2016). We then tested our hypothesized structural model via path analysis and, again, assessed its fit to the data. The indirect effect was calculated by estimating the product of the coefficients associated with the hypothesized cross-lagged relationships (social self-efficacy T1 → emotional impairment at T2*emotional impairment T1 → interpersonal strain at work T2; Cole & Maxwell, 2003). Its significance was evaluated by checking the 95 % upper and lower confidence intervals (CI) bootstrapped with 5.000 replications (Preacher & Hayes, 2008).

3. Results

3.1. Preliminary analyses

Table 1 reports the means, standard deviations, correlations and Cronbach’s alpha values of our scales. In accordance with the preliminary pooled European red cut-off scores of the BAT-12 for diagnostic purposes (see Schaufeli et al., 2023), 17.9 % of participants reported, on average, a severe burnout risk across the two time points (>2.96).

All study variables were significantly correlated in the expected direction, both cross-sectionally and longitudinally, and showed adequate reliabilities (Cronbach’s α ranged from 0.73 to 0.88). Longitudinal correlations supported moderate stability of the constructs over time (ranging from |0.40| to |0.50|). Emotional impairment was more strongly correlated with social self-efficacy and interpersonal strain over time than exhaustion, mental distance and cognitive impairment. Finally, we found that women scored lower in social self-efficacy at T2 and interpersonal strain at T2 than men. Employees who did not interact on a daily basis with customers scored lower on social self-efficacy at T1.

Confirmatory factor analysis supported the factorial validity of the scales at both T1 ($\chi^2 = 367.284$, $df = 155$, $p < .01$; CFI = 0.933; RMSEA = 0.063; SRMR = 0.061) and T2 ($\chi^2 = 320.885$, $df = 155$, $p < .01$; CFI = 0.954; RMSEA = 0.056; SRMR = 0.055). All standardized factor loadings had p -values lower than 0.001 and were >0.30 (ranging from 0.46 to 0.89 at T1 and from 0.64 to 0.88 at T2), confirming the appropriateness of each item as an indicator of the hypothesized dimension.

In line with zero-order correlations, emotional impairment was the only BAT core symptom to significantly predict interpersonal strain at

Table 1
Descriptive statistics and correlations.

	M	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) Social self-efficacy T1	5.30	0.95	0.83																	
(2) Emotional impairment T1	1.78	0.83	-0.35**	0.76																
(3) Exhaustion T1	3.31	1.15	-0.13*	0.33**	0.85															
(4) Mental distance T1	2.43	1.18	-0.22**	0.44**	0.33**	0.77														
(5) Cognitive impairment T1	1.74	0.74	-0.29**	0.44**	0.34**	0.40**	0.81													
(6) BAT-12 total T1	0.2-31	0.72	-0.32**	0.72**	0.73**	0.78**	0.69**	0.85												
(7) Interpersonal strain T1	1.80	0.76	-0.31**	0.37**	0.18**	0.39**	0.49**	0.46**	0.82											
(8) Social self-efficacy T2	5.37	0.93	0.50**	-0.32**	-0.15**	-0.23**	-0.24**	-0.31**	-0.18**	0.83										
(9) Emotional impairment T2	1.89	0.84	-0.27**	0.46**	0.18**	0.22	0.23**	0.36**	0.18**	-0.29**	0.73									
(10) Exhaustion T2	3.71	1.10	-0.14**	0.13*	0.40**	0.09	0.17**	0.27**	-0.14*	0.34**	0.88									
(11) Mental distance T2	2.52	1.19	-0.23**	0.23**	0.18**	0.45**	0.23**	0.38**	0.21**	-0.30**	0.47**	0.42**	0.82							
(12) Cognitive impairment T2	1.87	0.72	-0.25**	0.29**	0.16**	0.23**	0.45**	0.36**	0.25**	-0.33**	0.54**	0.35**	0.46**	0.81						
(13) BAT-12 total T2	2.59	0.73	-0.29**	0.35**	0.31**	0.34**	0.32**	0.45**	0.23**	-0.34**	0.74**	0.73**	0.82**	0.72**	0.87					
(14) Interpersonal strain T2	1.89	0.84	-0.23**	0.34**	0.20**	0.25**	0.29**	0.36**	-0.32**	-0.32**	0.40**	0.26**	0.43**	0.43**	0.49**	0.88				
(15) Sex	-	-	-0.10	0.00	0.04	-0.07	-0.06	-0.03	-0.08	-0.11*	-0.10	0.03	-0.11*	-0.05	-0.08	-0.16**	-			
(16) Age	3.57	1.46	-0.10	0.08	0.09	0.13*	0.11*	0.14**	-0.03	-0.05	-0.07	-0.11*	0.01	0.01	-0.05	-0.06	-0.03	-		
(17) Tenure	2.89	1.39	-0.09	0.04	0.10	0.17**	0.15**	0.16**	0.04	-0.05	-0.09	-0.06	-0.03	-0.02	-0.07	-0.08	0.08	0.71**	-	
(18) Customer contact	-	-	-0.11*	0.06	0.01	-0.01	0.08	0.04	0.07	-0.05	-0.04	-0.01	-0.08	0.04	-0.04	0.01	-0.01	-0.01	0.11*	-

Note. T1 = Time 1; T2 = Time 2; Sex (0 = male; 1 = female); Age (1 ≤ 30; 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 ≥ 60); Tenure (1 = 0-4; 2 = 5-10, 3 = 11-15, 4 = 16-20, 5 ≥ 21); Customer contact (0 = yes; 1 = no). Coefficient alpha reliability estimates are presented in brackets along the diagonal. The indices of skewness (ranged between -0.02 and 1.18) and kurtosis (ranged between -0.98 and 1.74) did not indicate substantive violations of normality (Kline, 2016).

* $p < .05$.
** $p < .01$.

T2 (see Table 2). To be sure, no major multicollinearity problems were found among the predictors (tolerance index ranged between 0.63 and 0.80 and the variance inflation factor ranged between 1.245 and 1.594).

3.2. Measurement invariance

The configural ($\chi^2 = 383.710$, $df = 183$, $p < .01$; CFI = 0.947; RMSEA = 0.056; SRMR = 0.045) and metric ($\chi^2 = 389.960$, $df = 183$, $p < .01$; CFI = 0.948; RMSEA = 0.055; SRMR = 0.047) measurement models showed a reasonable fit to the data. Moreover, their comparison supported longitudinal invariance up to the metric level and, thus, factor loadings equality held across T1 and T2 ($\Delta\chi^2 = 6.24$, $\Delta df = 8$, $p = .62$; $\Delta CFI = 0.001$; $\Delta RMSEA = -0.001$; $\Delta SRMR = 0.002$).

3.3. Structural models and mediation analyses

The hypothesized mediation model showed a good fit to the data ($\chi^2 = 47.720$, $df = 25$, $p < .01$; CFI = 0.958; RMSEA = 0.049; SRMR = 0.043). As displayed in Fig. 1, social self-efficacy at T1 was related to lower emotional impairment at T2 (H2) and, in turn, emotional impairment at T1 was significantly associated with higher levels of interpersonal strain at T2 (H1). The indirect effect was -0.02 ($p < .05$), and the associated bootstrapped CI did not include zero (LLCI = -0.040 ; ULCI = -0.004), therefore supporting a small mediation effect (H3). Moreover, the direct path from social self-efficacy at T1 to interpersonal strain at T2 was not significant ($\beta = -0.07$, $SE = 0.044$, $p = .16$) and did not improve the fit of the model ($\Delta\chi^2 = 3.99$ ($\Delta df = 1$); $p = .05$). As such, the relationship between social self-efficacy at T1 and interpersonal strain at work at T2 was mediated by emotional impairment over time. In regards to covariates, females showed lower levels of social self-efficacy at T1 ($\beta = -0.12$, $SE = 0.049$, $p < .01$), emotional impairment ($\beta = -0.12$, $SE = 0.047$, $p < .05$) and interpersonal strain at T2 ($\beta = -0.14$, $SE = 0.045$, $p < .01$) than men. The model explained 22,2 % of emotional impairment variance at T2 and 27,4 % of interpersonal strain variance at T2.

Additionally, we ran two alternative structural models, one testing for the reverse paths between variables and one employing the BAT-12 total score as a mediator instead of emotional impairment alone. The reverse model fared less well ($\chi^2 = 55.639$, $df = 25$, $p < .01$; CFI = 0.935; RMSEA = 0.062; SRMR = 0.051) than the hypothesized one. Interpersonal strain at T1 was neither related to a) emotional impairment at T2 ($\beta = 0.03$, $SE = 0.052$, $p = .59$) or b) social self-efficacy at T2 ($\beta = -0.01$, $SE = 0.046$, $p = .85$). However, emotional impairment at T1 was related to lower social self-efficacy at T2 ($\beta = -0.13$, $SE = 0.051$, $p < .01$). The BAT-12 alternative model fared less well too ($\chi^2 = 65.434$, $df = 25$, $p < .001$; CFI = 0.930; RMSEA = 0.064; SRMR = 0.054) Although the paths

Table 2

Regression results using BAT core symptoms as focal predictors of interpersonal strain at T2.

Parameter	Estimate	Standard error	Sig.	95 % confidence interval	
				LLCI	ULCI
Intercept	0.58**	0.14	<0.001	0.30	0.86
Exhaustion T1	0.06	0.04	0.11	-0.01	0.13
Mental distance T1	-0.01	0.04	0.78	-0.09	0.07
Cognitive impairment T1	-0.03	0.07	0.67	-0.16	0.10
Emotional impairment T1	0.18*	0.06	<0.01	0.06	0.28
Interpersonal strain T1	0.48**	0.06	<0.001	0.37	0.60

Note. Regression coefficients were controlled for Interpersonal Strain at T1. LLCI and ULCI indicate the lower and upper limits of the 95 % confidence interval. T1 = Time 1; T2 = Time 2.

* $p < .01$; ** $p < .001$.

from social self-efficacy T1 to BAT T2 ($\beta = -0.14$, $SE = 0.046$, $p < .01$) and from BAT T1 to interpersonal strain T2 ($\beta = 0.12$, $SE = 0.051$, $p < .05$) were significant, mediation did not reach statistical significance ($ab = -0.01$, $p = .05$, LLCI = -0.031 ; ULCI = 0.000).

4. Discussion

In this study, we investigated the longitudinal process linking social self-efficacy and burnout to interpersonal strain at work 24 months later. Our findings advance the literature in several ways. First, while previous studies have often combined interpersonal strain at work into a composite measure of burnout (e.g., Consiglio et al., 2013), this is the first to investigate interpersonal strain as an outcome of burnout. Specifically, our results show that burnout as a whole, and especially the symptom of emotional impairment, increases detachment and withdrawal from others. Actually, compared with the other core symptoms of burnout (i.e., exhaustion, mental distance, cognitive impairment), emotional impairment was the only longitudinal predictor of interpersonal strain. These findings extend existing research that suggests a developmental sequence from exhaustion to depersonalization (Mäkikangas et al., 2021; Taris et al., 2005), by adding the specific contribution of deteriorated emotional self-regulatory control which has previously been entangled under the broader concept of exhaustion (Shirom, 2005). Moreover, by employing interpersonal strain rather than depersonalization, we provided support for this longitudinal relationship in an organizational context different from healthcare and services. As such, we further corroborate the Leiter and Maslach's (1988) process model as our results indicate that emotional impairment primary drives interpersonal strain and not vice versa. This means that one's reactions of interpersonal strain are mainly rooted in the difficulty in managing the emotional burdens of a stressful working environment. Additionally, we extend the findings of Pluut et al. (2022), who found that burnout leads to withdrawal from relatives at home, to workplace relationships.

Second, this is the first study to link social self-efficacy with burnout. Indeed, while our results are in line with broader literature that has already associated self-efficacy at work with lower burnout (Shoji et al., 2016), the study adds the unique contribution of social self-efficacy in preventing emotional impairment. Indeed, our results suggest that social self-efficacy can help individuals preserve the functionality of negative emotion regulation in the workplace. Thus, we extend Fan et al. (2013) who suggested that employees with higher social self-efficacy, by building and maintaining high-quality social relationships, can experience more positive emotions and fewer negative ones. Furthermore, as a novel finding, we observed a reciprocal link between social self-efficacy and emotional impairment, whereby the uncontrolled experience of negative emotions can undermine employees' belief in their capability to establish positive and trusting relationships at work. Indeed, emotional liabilities can hinder a person from having enriching experiences and facing the challenges of the surrounding social environment (see Caprara et al., 2012).

Finally, we found that social self-efficacy is indirectly associated with a reduction in interpersonal strain reactions through lower emotional impairment. This result is in line with evidence supporting the notion that it is the synergy between emotions and positive social interactions that determines affiliation and social cooperation (Caprara et al., 2012). Specifically, our results offer a complementary perspective to those of Alessandri et al. (2021), who found that emotional regulatory capabilities can enhance prosocial behaviors at work by increasing social self-efficacy beliefs.

In regards to control variables, women exhibited lower social self-efficacy, emotional impairment, and interpersonal strain than men. Indeed, men tend to withdraw more at work than women (Houkes et al., 2011). However, although women use more tend-and-befriend strategies to cope with stress, they are generally inclined to react more intensely to social stressors (Taylor, 2011) and experience higher emotional distress (Purvanova & Muros, 2010). As such, these novel sex

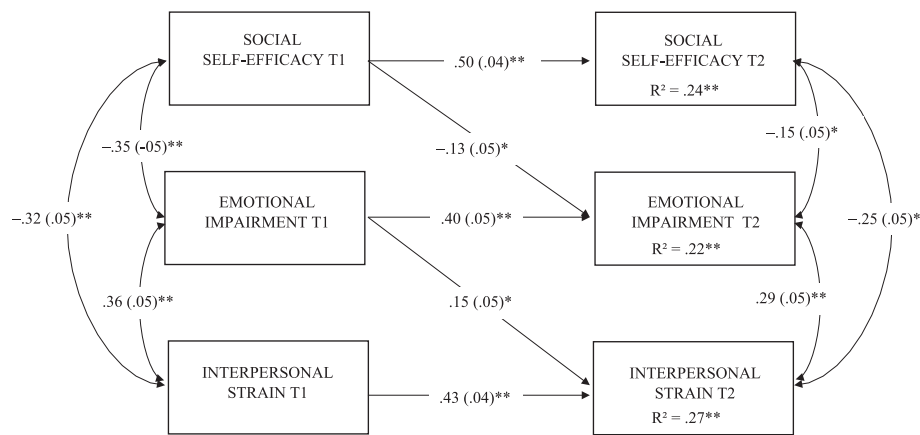


Fig. 1. The hypothesized model with standardized estimates.

Note. This figure represents the hypothesized mediation model in which non-significant paths and covariates are omitted for sake of clarity. T1 = time 1; T2 = time 2; R^2 = r-square indicates the degree of explained variance of the variable. Numbers in parentheses represent standard errors.

* $p < .01$; ** $p < .001$.

differences solicit further conceptualization in future research.

4.1. Practical implications

Our results may be relevant for targeting employees with preventive interventions to decrease risks of burnout and interpersonal strain. Training and coaching may be designed to enhance individual's self-efficacy beliefs regarding their social skills (Bozer & Jones, 2018). In addition, employees may benefit from cognitive-behavioral counseling or mindfulness sessions (Jamieson & Tuckey, 2017; McLeod, 2010). On the one hand, counselors can drive employees through the positive reappraisal of stressors as a means to manage one's negative emotions. On the other hand, mindfulness helps individuals to be attentive to current experiences to alleviate distress and foster emotional skills.

4.2. Limitations and future research

Our study employed only self-reported measures, thereby future multi-source replications, (e.g., incorporating evaluations from colleagues or supervisors) are recommended. A two-wave design was used to calculate the mediation effect based on the assumption of stationarity in longitudinal modeling, namely "the degree to which one set of variables produces change in another set remains the same over time" (Cole & Maxwell, 2003, p. 560). Albeit it lessens the biases of a cross-sectional approach, we recognize that future studies should employ more waves to replicate and extend our results. Although the stability of study variables aligns reasonably with past burnout literature (between 0.50 and 0.60; Shirom, 2005), its moderate nature suggests that changes may have occurred over time due to intervening events. For instance, even though results supported the model measurement invariance before and after the acute phase of the COVID-19 emergency (in line with the BAT-12 validation study in Italy, Mazzetti et al., 2022), we cannot entirely rule out that the pandemic may have had effects on our variables. Thus, further research should distinguish stable individual differences in our variables from potential variations due to interactions with the changing environment (see Eid et al., 2017). Finally, considering that the detected mediation effect was small, researchers should question more the optimal time-lag to investigate the evolution of our study variables.

5. Conclusion

This study investigated the role of individual differences and burnout core symptoms in driving interpersonal strain at work. By adopting the BAT framework, our results revealed that the core symptom of emotional impairment plays a pivotal influence on interpersonal strain

levels two years later. Moreover, social self-efficacy emerged as vital for decreasing long-term burnout and interpersonal strain. Our findings provide targeted insights to prevent employee malaise and call for further research on the interpersonal impairments of burned-out employees.

Submission declaration

All authors have approved the final version of the manuscript being submitted. Neither the manuscript nor any parts are currently under consideration or published in another journal. All materials used in the article (tables and figures) are original contents created by the authors. The data that has been used is confidential.

CRedit authorship contribution statement

Ferdinando Paolo Santarpia: Writing – review & editing, Writing – original draft, Visualization, Methodology, Formal analysis, Data curation, Conceptualization. **Chiara Consiglio:** Writing – review & editing, Project administration, Investigation. **Laura Borgogni:** Supervision.

Declaration of competing interest

None.

Data availability

The data that has been used is confidential.

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