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"Yes, I Can": The Protective Role of Personal Self-Efficacy in Hindering Counterproductive Work Behavior Under Stressful Conditions

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Abstract

Background and Objectives. Within the stressor-emotion model, counterproductive work behavior is considered a possible result of stress. It is well-known that self-efficacy mitigates the detrimental effects of stress and the stressor-strain relation. We aim to extend the stressor-emotion model of counterproductive work behavior by examining the additive and moderating role of work and regulatory emotional self efficacy dimensions. **Design and Methods**. A structural equation model and a set of hierarchical regressions were conducted on a convenience sample of 1,147 Italian workers. **Results**. Individuals who believed in their capabilities to manage work activities had a lower propensity to act counterproductively. Workers who believed in their capabilities to cope with negative feelings had a lower propensity to react with negative emotions under stressful conditions. Finally, results showed that self efficacy moderates at least some of the relationships between stressors and negative emotions, and also between stressors and counterproductive behaviors, but did not moderate the relationship between negative emotions and these types of conduct. **Conclusions.** Self efficacy beliefs proved to be a protective factor that can reduce the impact of stressful working conditions.

Keywords: Counterproductive work behavior, work self-efficacy, regulatory emotional self-efficacy, control, work stress

Introduction

Counterproductive work behavior (CWB) represents one of the most significant emerging criticalities in organizations worldwide. This behavior violates organizational and social norms, and so threatens the legitimate interests and well-being of both organization and its members. It can be oriented towards the organization as a whole (CWB-O; e.g., fraud, sabotage, theft) and also towards individuals within the organization (CWB-I; e.g., sexual harassment, verbal abuse, gossiping). Overall, the academic literature clearly highlights the impressive pervasiveness of these kind of behaviors and its costs (Basran, 2012; Vardi & Weitz, 2004). What it is clear from the literature is that CWB represents one of the possible results of stress at work and a response to frustrating working conditions (e.g., Spector & Fox, 2005). In particular, within the stressor-emotion model (Spector & Fox, 2005), which is largely supported in the organizational literature (e.g., Bowling & Eschleman, 2010; Fida, Paciello, Tramontano, Fontaine, & Barbaranelli, 2012; Fox, Spector, & Miles, 2001), CWB are considered the result of ineffective coping strategies with work stressors and an aversive response to the job stress process. Indeed, this behavior can be considered as a response to perceived organizational stressors as a form of behavioral strain: whenever employees perceive a job stressor, they may experience negative feelings that in turn may lead them to enact overt or covert damaging behaviors as a strategy to reduce the emotionally unpleasant condition derived from organizational frustrations (Penney & Spector, 2005; Spector, 1998). Previous studies demonstrated that organizational constraints, unmanaged conflicts, work overload, role stressors and lack of support are among the most common organizational characteristics highly correlated with negative emotions and CWB (Fox et al., 2001; Spector & Fox, 2005). Whilst the first three are tangible

stressors, support is a situational resource, however, the lack of support may be perceived as a stressor. In addition, some stressors, such as workload, can be considered challenges and may represent an opportunity for personal growth for some workers (Rodell & Judge, 2009). Other stressors such as role conflict or ambiguity are obstacles and may compromise workers' professional development and interfere with the achievement of their work goals (Rodell & Judge, 2009).

The process leading to CWB may be even more complex when considering workers' personality characteristics. Indeed, personality structures may influence the perception and the appraisal of the work context and the resulting emotional and behavioral tendencies (Lazarus & Folkman, 1984). For instance some authors have specifically investigated the role of trait anger (Fox et al., 2001), irritability (Fida et al., 2012), narcissism (Penney & Spector, 2002), negative affectivity trait (Bowling & Eschleman, 2010), moral disengagement (Fida, Paciello, Tramontano, Fontaine, Barbaranelli, & Farnese, 2014), examining how these potentially increase the risk of negative outcomes due to stress at work. Similarly, some scholars have also highlighted how different personality characteristics related to control may represent protective factors in managing the stress response — that is, the stressors' perception-emotional response-behavior chain (e.g., Kammeyer-Mueller, Judge, & Scott, 2009; Karasek, 1979; Lazarus & Folkman, 1984; Thompson, 1981). In fact, an individual who believes that they have the internal resources for the control and management of stressful situations perceives them as less stressful and responds less negatively. As a consequence, personal variables related to control may prevent undesirable stress outcomes such as CWB (Fox et al., 2001; Fox & Spector, 2006). Indeed, the perception of control is an important element of the stressor-emotion model, and since the first conceptualization of their model, Spector and Fox have suggested that control

affects it in the following three areas: a) perception of stressors; b) response to stressors—that is, emotional response; and c) response to emotions—that is, counterproductive response to negative emotions (Fox & Spector, 2006; Spector, 1998). In particular, control can have both an additive role (as predictor), influencing the perception of stressors, the negative emotional response to it, and the consequential negative behavioral outcome, and an interactive effect (as moderator), influencing all the relations of the stressor-emotion model.

While the importance of control has been underlined mainly from a theoretical point of view, only a limited number of studies have empirically examined the role of personality variables related to control in contrasting CWB via examining how control can affect and/or buffer the perception of stressors, the emotional response to stressors, and the behavioral response to negative emotions. These few studies have generally examined the role of control in terms of autonomy (e.g., Fox et al., 2001; Vardi & Weitz, 2004), locus of control (Fox & Spector, 1999), or core self-evaluations (Bowling, Wang, Tang, & Kennedy, 2010; Judge, Locke, & Durham, 1997).

In the current study, we will examine the role played by control in the stressor-emotion model of CWB, adopting Bandura's social cognitive theory (1986) as our theoretical framework. Control will be conceptualized in terms of domain-specific workers' self-efficacy (SE) beliefs. This construct can be considered as the expression of self-regulatory functioning: people exercise control over events through self-control and self-regulation (Bandura, 1986). Remarkably, Fox and Spector themselves argued that "studies that consider the role of self-efficacy [. . .] are needed" (2006, p. 17), hypothesizing that " . . . individuals high in self-efficacy concerning a domain are unlikely to appraise domain-specific challenges [. . .] as stressors" (p. 9); further,

they “conjure up apprehensive cognitions leading to anxiety or other negative emotions” (p. 16). In this research, we will operationalize SE in terms of personal beliefs about control over work activities and tasks (work SE, W-SE), and about the control and management of emotional activation (regulatory emotional SE, RE-SE), and we will examine how these two dimensions intervene in the stressor-emotion model of CWB. **To the best of our knowledge, no previous studies have jointly investigated these two SE dimensions in the organizational setting or have tested whether and how they differently operate as protective factors in the stressor-strain process, thereby reducing the recourse to CWB. Given that we aim to examine how both W-SE and RE-SE intervene in the perception-emotion-behavior chain, exerting both an additive and moderating role.**

Self-Efficacy at Work

Perceived capabilities to execute a course of action and to master tasks, emotions, and situations to pursue one’s own goals (especially under difficulties and challenging conditions) are core elements of SE beliefs and represent the root of efficacious behavior and successful adaptation. Those who perceive themselves as more efficacious face difficulties more constructively and persevere longer when they encounter obstacles. Thus, SE aids in the understanding of why, given the same external conditions, not all individuals perceive external situations in the same way, show the same emotional response, and react with the same behaviors.

The value of SE has been extensively recognized as a promoting factor of work success (e.g., Stajkovic & Luthans, 1998), and as an individual protective factor in stressful working conditions (Jex & Bliese, 1999). Studies focusing on the stressor-strain process (Bandura, 1997; Bandura, Cioffi, Taylor, & Brouillard, 1988) have

underlined that SE, as it relates to individual coping skills, affects the amount of stress that employees experience in threatening or difficult situations. Furthermore SE affects the perception of work context and job stressors (Caprara, Barbaranelli, Borgogni, & Steca, 2003) and individuals' emotional experience and behaviors (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003). In addition SE intervenes in the relation between external stressors and stress (Bandura, 1997; Wiederfeld, O'Leary, Bandura, Brown, Levine, & Raska, 1990). Overall while inefficacious thinking (typical for people with lower SE) produces distress and reduces people's level of functioning (Jex & Bliese, 1999; Lazarus & Folkman, 1984), high SE prevents emotional exhaustion and anxiety (Bandura, 1992; Grau, Salanova, & Peiró, 2001), promoting more appropriate coping strategies (Jex & Bliese, 1999).

With regards to the relationship between domain-specific SE beliefs and misconduct, the contributions to the literature come from the developmental field. Overall, these studies suggested that SE exerts a protective role in contrasting antisocial behaviors and in promoting prosocial behaviors (Bandura et al., 2003; Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001;Caprara, Gerbino, Paciello, Di Giunta, & Pastorelli, 2010). The expected protective role of SE in preventing CWB is also in line with findings that have considered generalized SE reporting that people with positive core self-evaluations display less CWB (e.g., Chang, Ferris, Johnson, Rosen, & Tan, 2012).

We believe that the study of SE and personality characteristics related to control in the stress process is particularly important, especially in the actual business environment, which is characterized by rapid change and unpredictability. The need for continuous adjustment to a work environment that seems to have become

permanently more turbulent and threatening creates increasingly stressful working conditions (e.g., Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004), making it even more important to focus the research on the employees' personal resources related to control for coping with stressful work contexts.

The Present Study

In the present study, we aim to extend the stressor-emotion model of CWB by examining the additive and moderating role of W-SE and RE-SE. The former concerns the perceived capability to deliver goal-directed behavior at work, permitting workers to perceive difficulties as opportunities to grow and to maintain proper motivation, including when work contexts become very demanding. Employees with high W-SE effectively regulate their behavior in accordance with their own work goals, and they successfully perform their jobs, even under undesirable conditions (Jimmieson, 2000). RE-SE, never examined in the organizational setting, concerns the perceived capability to overcome negative affective experiences and to control impulses under frustrating and stressful conditions; thus, it is an emotional self-regulation capability to reduce negative emotional feelings once they are aroused. Research showed that people with higher RE-SE behave less aggressively (Bandura et al., 2003; Caprara et al., 2010) and more prosocially (Caprara & Steca, 2005).

As shown in Figure 1, in relation to the main effects of SE on the different components of the stressor-emotion model, we hypothesized that both W-SE and RE-SE will be negatively related to perceived stressors (H1), and to negative emotions above and beyond perceived stressors (H2). Moreover, as RE-SE is specifically operationalized within the emotional domain, the relationship with negative emotions is expected to be stronger for RE-SE than for W-SE (H2a). We

also hypothesized that both W-SE and RE-SE will be negatively related to CWB above and beyond negative emotions and stressors (H3). Moreover, since W-SE is specifically operationalized within the domain of behavioral control at work, we expected this negative relationship to be stronger for W-SE than for RE-SE (H3a).

With regards to the moderating effects of SE we hypothesized that W-SE and RE-SE will moderate the relationships between the perception of stressors and negative emotions (H4), between stressors and CWB (H5) and between negative emotions and CWB (H6). These relationships are expected to be weaker when the SE is higher.

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Figure 1

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Methods

Participants and Procedure

The sample was comprised of 1,147 (53.5% women) Italian working adults, with a mean age of 40 years (SD = 11), employed in different organizations mainly in the private sector (62.6%) and from small and medium-sized enterprises (0 to 15 employees: 27.4%; 16 to 50 employees: 19.2%; 51 to 100 employees: 10.8%; 101 to 500 employees: 16.1%), recruited using a convenience sampling method. The majority (52.4%) had a high school education. The most prevalent types of job are: clerical jobs (50%), teacher (11%) and blue collar (9%). Pertaining to employment contract type, 68.7% were permanent employees; 12.2% were temporary employees; 15.7% had other types of contracts. The mean job seniority was 16 years (SD = 11) and, on average, participants had held their positions (at the time of the study) for 10

years (SD = 10). Finally participants work on average 35 hours per week (SE = 11.1; range 10-60 hours). Participants took part in the study on a voluntary basis and did not receive any form of compensation, financial or otherwise. **The ethical committee of Sapienza University of Rome approved the study**. Trained research assistants handed out questionnaires in blank envelopes. Employees filled in the questionnaire individually and returned it the same day they received it. Before starting, the researcher explained that their responses would be absolutely confidential and that the research was not commissioned by the organization for which they worked.

Measures

Interpersonal conflict. This was measured by the Italian version of the 4-item Interpersonal Conflict at Work Scale (Barbaranelli, Fida, & Gualandri, 2013; Spector & Jex, 1998). Respondents were asked how often (from 1 = less than once per month or never to 5 = several times per day was used) they got into arguments at work and how often other people at work were rude to, yelled at, and/or did nasty things to them.

Organizational constraints. These were measured by the Italian version of the 11-item Organizational Constraints Scale (Barbaranelli et al., 2013; Spector & Jex, 1998). This scale measures events or situations at work that interfere with task performance. Respondents were presented with a list of situational constraints and were asked to indicate how often (five-point response scale as described above) they found it difficult or impossible to do their job because of each constraint.

Workload. This was measured by the Italian version of the 5-item Quantitative Workload Inventory (Barbaranelli et al., 2013; Spector & Jex, 1998). This scale measures the quantity and speed of work carried out by the respondents.

Employee were asked to indicate how often (five-point response scale as described above) their workload affected their standard job activities.

Role stressors. Role conflict and role ambiguity were measured by the 14-item Role Conflict and Ambiguity Scale developed by Rizzo, House, and Lirtzman (1970). Participants were asked to indicate how often (from 1 = never or almost never to 5 = very often or always) they experienced problems related to their work role.

Social support. This was measured by 5 items from the Job Content Questionnaire (JCQ) (Karasek et al., 1998). Participants were asked how often co-workers and supervisors offered them support (from 1 = never or almost never to 5 = very often or always).

Negative emotions. These were measured by the Job-Related Affective Well-Being Scale (Van Katwyk, Fox, Spector, & Kelloway, 2000), including 15 negative emotions experienced in the last 30 days in response to the job. Employees were asked to indicate how often (from 1 = almost never to 5 = extremely often or always) any part of their job made them feel each emotional state.

Counterproductive workplace behavior. This was measured via a shortened version of the Italian version of the Counterproductive Work Behavior Checklist (CWB) (Barbaranelli et al., 2013; Spector et al., 2006), which measures the two CWB dimensions: one including behaviors towards the organization as a whole (CWB-O, 10 items) and the other including behaviors toward individuals within the organization (CWB-I, 17 items). Participants were asked to indicate how often (from 1 = never to 5 = every day) they act each of the listed behaviors in their present job.

Work and regulatory SE. These were measured respectively by items adapted from the Teacher SE Scale (Caprara et al., 2003) and the Emotional SE Scale (Bandura et al., 2003) to work and organizational contexts. Participants were asked to

indicate how capable they were (from 1 = not at all to 7 = completely) of efficaciously performing the behavior presented in each of the 15 items. A preliminary exploratory factor analysis confirmed the two-factor structure.

Table 1 provides both the Cronbach α and factor score determinacy coefficients demonstrating the quality of the scales used in this study.

Data Analysis

Data analysis was performed using SPSS 18.0 and MPlus 7.1. In order to examine the main effects of SE, a structural equation modeling (SEM) technique was used. SEM allows to concurrently test all the relationships showed in Figure 1 also controlling for covariates (i.e., gender, education, years of work experience and hours worked per week). Additional strengths of SEM are the possibility to control for measurement error (in the examined model all the variables were posited as a single-indicator latent variable, Bollen, 1989) and to examine the indirect effects of SE in the whole process. To this end, we have used the indirect effect test with the bootstrap procedure (MacKinnon, 2008) implemented in Mplus to also compute the confidence interval for each indirect effect. Due to the non-normality of one measure (CWB-I), we used the Mplus robust ML method for parameters estimation.

In order to examine the moderation of W-SE and RE-SE on stressor-emotion model relationships, we conducted three multiple hierarchical linear regressions (one for each dependent variable). Control variables were entered in the first step; W-SE, RE-SE, stressors and negative emotions (the latter only when CWBs were dependent variables) were entered in the second step; interaction terms of W-SE and of RE-SE with all other variables were entered in the third step. Before performing regressions, predictor variables were centered at the mean in order to reduce multicollinearity and

then multiplicative terms were created to test the interaction effects. To test the moderation hypotheses, we considered change in R^2. To better interpret the significant interactions, we used post-hoc simple slopes analysis and graphical representation (Cohen, Cohen, West, & Aiken, 2003).

Unlike SEM analysis, hierarchical regression has the advantage of allowing for a much clearer breakdown of the variance explained by control variables, main effects, and interactions. However, regression does not allow controlling for measurement error. As a consequence, the explained variance in a regression analysis frequently differs from that resulting from analogous model testing by SEM, being higher or lower depending on the specific pattern of covariances that is analyzed (see Bollen, 1989).

Results

The descriptive statistics and correlations for all studied variables are presented in Table 1. As expected W-SE and RE-SE negatively correlated with organizational constraints, role ambiguity, role conflict, negative emotions, and CWB dimensions, and positively correlated with support. Contrary to our hypothesis, interpersonal conflict does not correlate with either W-SE or RE-SE. Furthermore, surprisingly workload does not correlate with RE-SE while it is positively correlated with W-SE. Therefore, employees with higher SE perceived their work context as more supportive and less stressful, excepting workload, and experienced less negative emotions in relation to their jobs and behaved less counterproductively.

Table 1

With regard to the SEM the model displayed in Figure 2, in which all the non-significant hypothesized paths (Figure 1) were fixed to zero, yielded an excellent fit: $\chi^2(df = 19) = 24.87$, $p = .16$, CFI = 1.00, RMSEA = .017 (CI = .000, .033), $p = 1.00$, SRMR = .012. In line with the theoretical framework and previous research, all of the stressors influenced negative emotions, with the only exception of role ambiguity. Furthermore some stressors influenced CWB-O and CWB-I not only indirectly through negative emotions but also directly: CWB-O was positively influenced by organizational constraints and CWB-I by interpersonal conflict and negatively by job support. W-SE played an additive role on all the stressors, with the only exception of interpersonal conflict. Specifically, the workers with higher levels of W-SE perceived lower levels of role ambiguity, role conflict and organizational constraints and higher levels of job support and workload. Moreover, workers with higher levels of RE-SE also perceived lower levels of workload. However, the latter effect necessitates further consideration as the zero order correlation between RE-SE and workload is non-significant albeit negative (r=-.06, see table 1). Although the direction of this relationship is consistent with expectations it must be considered that the significant negative effect that emerged in SEM analysis ($\beta = -.20$, $p < .001$) may be at least partially attributed to the statistical suppression phenomenon (see Cohen et al., 2003) due to the high correlation between W-SE and RE-SE, and to the inverse relationship with workload (being the significant correlation between W-SE and workload equal to .12, see table 1). Furthermore, while RE-SE influenced negative emotions but not CWB, W-SE influenced both CWB-O and CWB-I but not negative emotions. Hence, in line with expectations, results suggest that workers with higher levels of RE-SE experienced lower levels of negative emotions in relation to their job, while workers with higher levels of W-SE behaved less counterproductively. In addition to this,

indirect effect test showed that RE-SE influenced both CWB-O and CWB-I indirectly through negative emotions (total indirect effects: β = -.048; 95%CI =-.069, -.027 and β = -.030; 95%CI = -.052, -.007 respectively), and W-SE influenced both CWB-O and CWB-I indirectly through stressors and their effects on negative emotions (total indirect effects: β = -.030; 95%CI =-.043, -.018 and β = -.044; 95%CI =-.066, -.023, respectively).

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Figure 2

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The findings also highlight interesting patterns for covariates. In particular, females scored higher in negative emotions (β = .10), showed lower RE-SE (β = -.25) and acted less CWBs (CWB-O β = -.10 and CWB-I β = -.08). Furthermore, they tended to perceived more role ambiguity (β = .10). Workers with higher education levels experienced more negative emotions (β = .06), perceived higher workload (β = .09), and acted less CWB-I (β = -.08). Those who work more hours per week perceived greater interpersonal conflicts (β = .08), workload (β = .23), role ambiguity (β = .09) and role conflict (β = .13), experienced more negative emotions (β = .08) and acted more CWB-I (β = .10). Finally workers with more work experience showed higher W-SE (β = .07), perceived higher levels of interpersonal conflict (β = .08) and less role ambiguity (β = -.11), experienced less negative emotions (β = -.07) and acted less CWBs (CWB-O β = -.15 and CWB-I β = -.06).

Results of hierarchical regression analyses (Table 2) are consistent and coherent with findings from SEM. In particular, the significant direct effects identified in SEM (for stressors, negative emotions, SEs, and control variables) were replicated in the regressions. Overall regression explained less variance of negative

emotions, and more variance of CWB-I and of CWB-O than SEM (respectively 38% vs. 44%, 16% vs 14%, and 19% vs. 18%). Moreover W-SE and RE-SE moderated, although with a small impact, some of the relationships. Neither W-SE nor RE-SE moderated the relationship between negative emotions and CWB (see Table 2).

Table 2

Post-hoc simple slopes analysis (**Figures 3a and 3b**) showed significant differences among the slope coefficients ($p_{diff} < .05$). With regard to the moderating role of SE on the relationship between stressors and negative emotions (Figure 3a) surprisingly workers with higher W-SE responded with higher negative emotions in situations with high organizational constraints. Furthermore, in line with our hypothesis, workers with lower RE-SE responded with higher negative emotions in situations with high role conflict. **With regard to the moderating role of SEs on the relationship between stressors and CWB-I, only workers with lower W-SE responded with more CWB-I in situations with organizational constraints and in non-supportive contexts (Figure 3a). Finally with regard to the moderating role of SE on the relationship between stressors and CWB-O, only workers with lower W-SE responded with CWB-O in situations with high organizational constraints and with lack of support (Figure 3b). Further, only workers with lower RE-SE responded with higher CWB-O in non-supportive contexts (Figure 3b).**

Figures 3a and 3b

Discussion

Our findings highlighted the protective role of the two SE dimensions in the stress process conducive to CWB. First, as hypothesized, results of both SEM and regressions attested that W-SE played a critical role in discouraging CWB, while RE-SE was crucial in contrasting negative emotional reactions. Workers that believed in their capabilities to manage work activities even under aversive conditions had a lower propensity to behave destructively in the organization (toward the organization as a whole and toward persons in the organization), compromising the achievement of work goals and more generally the organizational performance and workers' well-being. Similarly, workers who believed in their capability to cope with negative feelings showed a lower propensity to react with negative emotions even under stressor conditions, usually leading to CWB.

These results attest to two different ways in which individual control in terms of self-regulation operates in preventing undesirable behaviors under frustrating situations. People's beliefs about their self-regulatory emotional capabilities help them to avoid becoming overwhelmed by their negative emotions (anger, anxiety, frustration), allowing them to find alternative behavioral responses to such feelings that are different from aggressive and impulsive conduct. In the framework of the frustration-aggression hypothesis, job frustration may imply a lower arousal in people with higher RE-SE, which can interrupt the frustration-arousal-aggression chain. People's beliefs about their capability to control their work behavior under different conditions permit them to face stressors by transforming obstacles into challenging tasks and to select "productive" behaviors instead of resorting to CWB. Hence, employees who perceive themselves as highly efficacious in these domains better manage environmental stressors and experience lower levels of distress and

physiological arousal when facing challenges and difficult goals. As a consequence, they are less subject to negative emotions and less prone to CWB. In sum, although RE-SE does not directly influence the perception of stressors and CWBs, it plays a pivotal role by preventing workers' experience of negative emotions. At the same time, although W-SE does not impact directly upon the emotional response, it inhibiting the process leading to CWBs, by directly hindering them and by intervening at the very initial stage in employees' appraisal of almost all of the stressful working conditions we considered (interpersonal conflict is the only stressor that is not correlated with SE). In particular, employees with higher W-SE perceived lower levels of role stressors and organizational constraints. Probably, these individuals are more goal-oriented and are more prone to resolve different and conflicting external demands by ordering them according to an internal hierarchical representation of work goals. Moreover it is likely that these performance-oriented workers may perceive organizational constraints as predicable and manageable issues to be accounted for in their action plans, rather than unexpected obstacles with which they have to deal. In addition, workers with higher levels of W-SE perceived higher levels of job support. It is plausible that individuals with high W-SE are more confident in receiving social support because they are more able to create the social conditions needed for achieving personal and common goals. Moreover, they could have a central position within the work for their better performance and their ability to promote social reciprocity and a collective sense of efficacy.

A last, unexpected, result concerns employees with higher levels of W-SE, which perceived higher levels of workload. This is probably due to their goal commitment and goal attainment: their confidence in their capability to perform, to manage work demands, and to achieve work goals, in line with their internal standards (usually

high), makes them more at risk of exceeding in work activities and consequently perceiving heavier workloads. Furthermore, they could likely take on a greater workload to test themselves, as workload can be considered as a challenge stressor (Rodell & Judge, 2009). However, future research should further investigate this issue by including job description characteristics or controlling for the roles that employees play.

Our findings related to the moderation of SE showed a more complex and articulated picture. Overall SEs (and specifically W-SE more than RE-SE) significantly moderated only a few of the relationships between stressors and negative emotions and between stressors and CWB, while none of them moderated the relationship between negative emotions and CWB. Moreover, the moderating effects are lower than the main effects.

Employees with lower RE-SE react with higher levels of negative emotions when they have to face conflicting demands with respect to their roles. Moreover, opposite to our initial hypothesis, when people with a higher sense of W-SE perceived high organizational constraints, they react with higher levels of negative emotions. A possible explanation for this result may relate to Bandura's (1997) consideration that workers who believe they have adequate capabilities to achieve their work goals and to face challenging tasks, generally display greater motivation and performance. Likely, they become extremely frustrated when they are over-limited in their work activities by environmental constraints that are not under their direct control (i.e., poor equipment or supplies, incorrect instructions). Nevertheless, despite the activation of negative emotions, as shown in both regressions and SEM, they do not resort to greater CWB and could select different behavioral responses, for example decreasing

their motivation over time, putting less effort into their job, or reducing their extra-role behaviors (such as organizational citizenship behaviors).

People with lower levels of W-SE also showed a higher propensity to resort to CWB-O and CWB-I when they felt they did not have support from their colleagues and supervisors, as well as when the conditions to achieve work goals were not guaranteed (organizational constraints). As a consequence, in organizations in which working conditions are highly constrained, and/or with a low collaborative climate, workers that cannot rely on well-based beliefs about their capabilities to manage work goals are more at risk of behaving counterproductively.

In contrast with our hypothesis, our results showed that SE does not moderate the relation between emotions and behavior, and this is actually in line with other research (Fida et al., 2012). Workers with different levels of SE have the same propensity to react with CWB when they experience negative emotions. In other terms, SE intervenes in people's appraisal of stressful contexts, but not in the translation of negative emotions into deviant behavior.

Although our hypotheses on the interactive effect of SE beliefs were only partially confirmed, and the main effects are much higher than the corresponding moderating effects, these findings contribute to a better articulation of our results, and necessitate further research. In particular it would be interesting to examine in an experimental setting whether and how SE intervenes in different stressful conditions and in turn, clarify why the interactive effect of SE beliefs is only partial. Furthermore the interactive effect of SE can be plausibly linked to the degree of manageability of stressful situations. It is reasonable to hypothesize that individuals with high W-SE may be particularly able to avoid the stressor-negative emotions-CWB chain when the source of stress is manageable, that is employees may have some degree of freedom

to intervene on it. On the other hand they may be even more exposed to that chain when they are subject to organizational and contextual forces that are entirely external to them and upon which they can exert minimal control. Unfortunately, the stressors in this study were not operationalized considering the degree to which each stressor can be manageable; hence it is only possible to provide some initial speculations that will require future study to gain empirical support. It would also be relevant to include some information about the leadership style and the quality of the relationship within the organization/work team, since these characteristics can eventually originate or exacerbate stressful conditions at work. Indeed, in the present study, SE has a tangential or absent role in moderating variables that can be highly depending on the leader (i.e. role stressor, workload, conflict), while is quite relevant in relation to the lack of support and organizational constraints. The former is possibly the stressor on which the employee can have the strongest direct influence. Conversely the latter stressor is generally the least manageable by employees, particularly when organizational constraints are due to limited economic capacity and therefore only partially ameliorated by effective leadership. Future studies should test whether and how leadership and SE jointly modulate the relationships posited in the stressor-emotion model, also taking into account contextual conditions that can affect the degree of manageability of stressors.

These findings represent a preliminary examination of the role of individual differences in self-control in the stressors-emotions-deviant behavior chain and have some limits. In fact, it is not possible to draw alternative causal relationships among our variables due to the cross-sectional nature of our data, even though the posited model is strongly grounded in prior theories (Spector & Fox, 2005). Future longitudinal and experimental research must strengthen the tested model. **Another**

limitation is the exclusive use of self-report measures, although Fox and colleagues (2007) demonstrated the convergence between self- and peer-reports in the majority of stressor-emotion model measures. Another limitation of the study concerns the internal coherence of some of the scales. While most of the scales override the "golden standard" of alpha greater/equal .70 (see Nunnally & Bernstein, 1994), two scales (namely role conflict and social support) show an alpha of around .68. It is well known, however, that alpha is a non-optimal index of internal coherence, especially when items are not tau equivalent (i.e., they have the same factor loadings). In this case other indices that better reflect the factorial structure of the scale are recommended. Among these indices we considered factor score determinacy coefficients (McDonald & Mulaik, 1979). Finally, we used a convenience (although large) sample and this affects the generalizability of the findings. Ideally, future studies should test the suggested model in a probability sample, taking into account different organizational contexts or specific jobs.

Conclusion and practical implications

This study represents an attempt to examine the role played by control within the stressor-emotion model of CWB, an area that has received limited attention in the field, by using an agentic perspective of human functioning and behaviors. According to the reciprocal determinism perspective described by Bandura (1986), SE beliefs, being related to the self-regulatory system, are a “malleable” social-cognitive structure susceptible to change due to the reciprocal influences between individuals and context, making them steadier. This means that organizations can design interventions by taking into account their employees’ perception of control at the behavioral and emotional level so as to hinder negative emotions at work and to

reduce the risk of behaviors that violate organizational norms that interfere with organizational functioning and with the quality of products or services.

With the likely fact that employees have to confront a work context and job conditions that are more and more uncertain, it becomes relevant to understand if and how personal characteristics related to control may dissuade workers from the negative outcomes of stress and consequently protect their organizations from misconduct. In our study, SE proved to be a protective factor that can reduce the impact of stressful working conditions. Further research should investigate if additional factors could intervene in the stressor-negative emotion-CWB chain.

In conclusion, it is relevant to understand if organizations may help their employees in enhancing their beliefs about the different SE domains, creating a sense of agency for the management of stressful situations and creating a more resilient organization (Jacobs & Blustein, 2008). Coherently, interventions can be designed with the aim of increasing self-regulatory capabilities, for example, by planning a distinct set of learning opportunities, giving constructive feedback, promoting modeling processes, and by the exposition to alternative behavioral patterns. Thus, prospectively, this study's findings may inform and guide the design and implementation of interventions aimed at decreasing the incidence of deviant behaviors in the organization by focusing on a specific area of individual vulnerability related to individual control. **Specifically in line with Bandura's theory, it would be possible to design interventions on stress management aimed at increasing workers' internal control through mastery (e.g., role playing in training section) or vicarious experience (e.g., critical incident technique to share good practices and to analyse situations positively managed by other co-workers).**

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Figure captions

Figure 1. The additive and moderated role of SE within the stressor-emotion model

Figure 2. Results of the additive role of SE within the stressor-emotion model

Figure 3. Results of the moderation role of SE

Table 1. Descriptive statistics, **reliability** and correlations among all study variables

	M	SD	**α**	**FSD**	1	2	3	4	5	6	7	8	9	10
1. Interpersonal Conflict	2.10	0.72	**.71**	**.75**	-									
2. Constraint	2.33	0.78	**.89**	**.90**	.38**	-								
3. Workload	3.40	0.83	**.86**	**.86**	.27**	.28**	-							
4. Support	3.65	0.70	**.69**	**.78**	-.24**	-.33**	.03	-						
5. Role ambiguity	3.53	0.80	**.70**	**.72**	.04	.20**	.09**	-.31**	-					
6. Role conflict	2.43	0.81	**.67**	**.70**	.21**	.39**	.19**	-.19**	.22**	-				
7. Negative emotion	2.09	0.66	**.90**	**.91**	.33**	.39**	.23**	-.32**	.26**	.29**	-			
8. CWB-O	1.41	0.41	**.79**	**.82**	.10**	.22**	.02	-.15**	.14**	.18*	.26**	-		-
9. CWB-I	1.20	0.33	**.89**	**.92**	.20**	.21**	.06*	-.21**	.07*	.18*	.23**	.54**	-	
10. W-SE	5.76	0.85	**.89**	**.90**	.01	-.15**	.12**	.21**	-.33**	-.09*	-.25**	-.33**	-.19**	-
11. RE-SE	4.85	1.05	**.86**	**.87**	-.02	-.15**	-.06	.17**	-.27**	-.09*	-.35**	-.21**	-.14**	.59**

Note. ** p <.001; * p <.05; α = Cronbach's alpha; FDS = Factor score determinacy; CWB-I = counterproductive work behavior toward individuals; CWB-O = counterproductive work behavior toward organization; W-SE = work self-efficacy; RE-SE = regulatory emotional self-efficacy

Table 2. Multiple hierarchical regressions results

		Negative Emotion		**CWB-I**		**CWB-O**	
		Beta[a]	p	Beta[a]	p	Beta[a]	p
Step 1	Gender	**.10**	**.00**	**-.10**	**.00**	**-.09**	**.00**
	Work Tenure	-.05	.08	-.05	.09	**-.14**	**.00**
	Education	**.06**	**.02**	**-.09**	**.00**	**-.06**	**.04**
	Hours per week	**.07**	**.01**	**.07**	**.02**	.01	.78
Step 2	W-SE	-.05	.12	**-.08**	**.03**	**-.21**	**.00**
	RE-SE	**-.21**	**.00**	-.03	.51	.01	.80
	Interpersonal conflict	**.18**	**.00**	**.10**	**.00**	.01	.79
	Organizational constraints	**.16**	**.00**	.06	.09	**.10**	**.01**
	Workload	**.10**	**.00**	-.02	.58	-.03	.38
	Support	**-.14**	**.00**	**-.12**	**.00**	-.03	.38
	Role ambiguity	**.07**	**.01**	.06	.06	.02	.57
	Role conflict	**.10**	**.00**	**.09**	**.01**	**.10**	**.00**
	Negative Emotion			**.11**	**.00**	**.14**	**.00**
Step 3	W-SE * Interp. Conflict	-.01	.81	.04	.32	.06	.13
	W-SE * Org. constraint	**.10**	**.01**	**-.12**	**.01**	**-.10**	**.03**
	W-SE * Workload	.00	.91	.06	.11	-.02	.63
	W-SE * Support	.00	.93	**.09**	**.03**	**.08**	**.04**
	W-SE * R. Ambiguity	.00	.97	.04	.30	.03	.44
	W-SE * R. Conflict	.00	.98	.03	.43	-.04	.34
	RE-SE * Interp. Conflict	.03	.36	-.06	.14	-.02	.60
	RE-SE * Org. constraints	-.06	.15	.06	.22	.05	.33
	RE-SE * Workload	-.03	.32	.04	.24	.05	.22
	RE-SE * Support	.00	.95	-.05	.23	**.09**	**.02**
	RE-SE * R. Ambiguity	.02	.54	-.05	.17	-.02	.53
	RE-SE * R. Conflict	**-.07**	**.04**	-.01	.80	-.01	.77
	W-SE * Negative Emotion			-.02	.65	-.02	.64
	RE-SE * Negative Emotion			.02	.72	.05	.25
	Set 1 R^2	.05 ($p < .01$)		.03 ($p < .01$)		.03 ($p < .01$)	
	Set 2 R^2	.31 ($p < .01$)		.02 ($p < .05$)		.13 ($p < .01$)	
	Set 3 R^2	.02 ($p < .05$)		.02 ($p < .05$)		.03 ($p < .01$)	
	Total R^2	.38 ($p < .01$)		.16 ($p < .01$)		.19 ($p < .01$)	

Note. Significant regression coefficients are shown in boldface.

[a] The beta coefficients reported refer to the finally step of the regressions

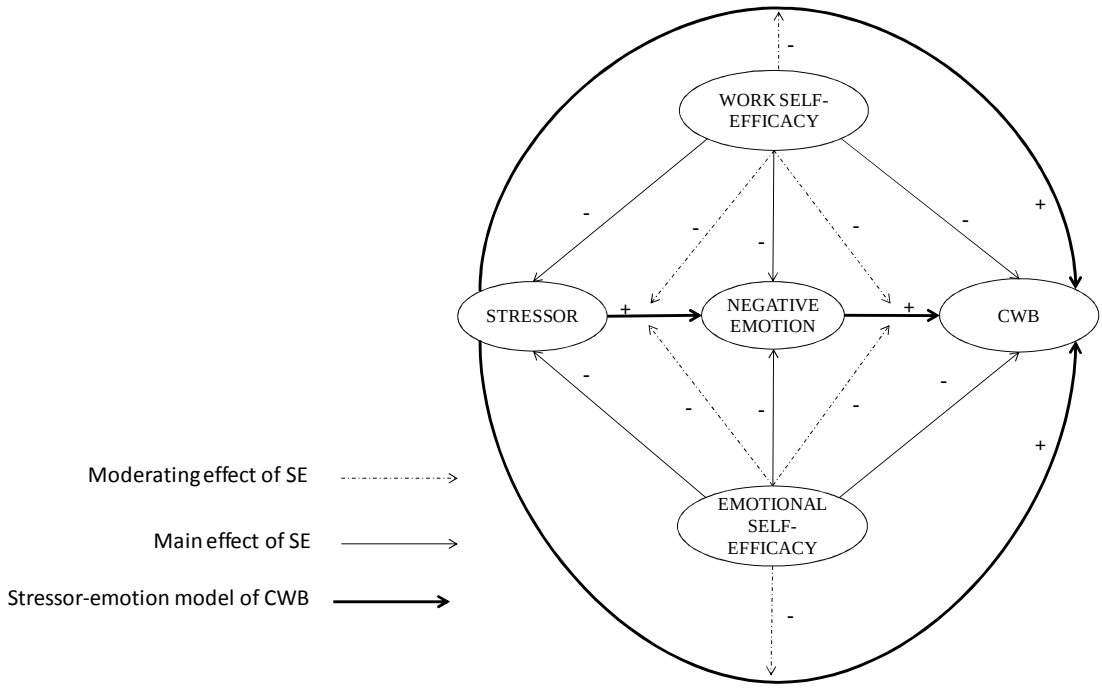
Figure captions

Figure 1. Theoretical model. This figure shows the expected additive and moderated role of self-efficacy within the stressor-emotion model

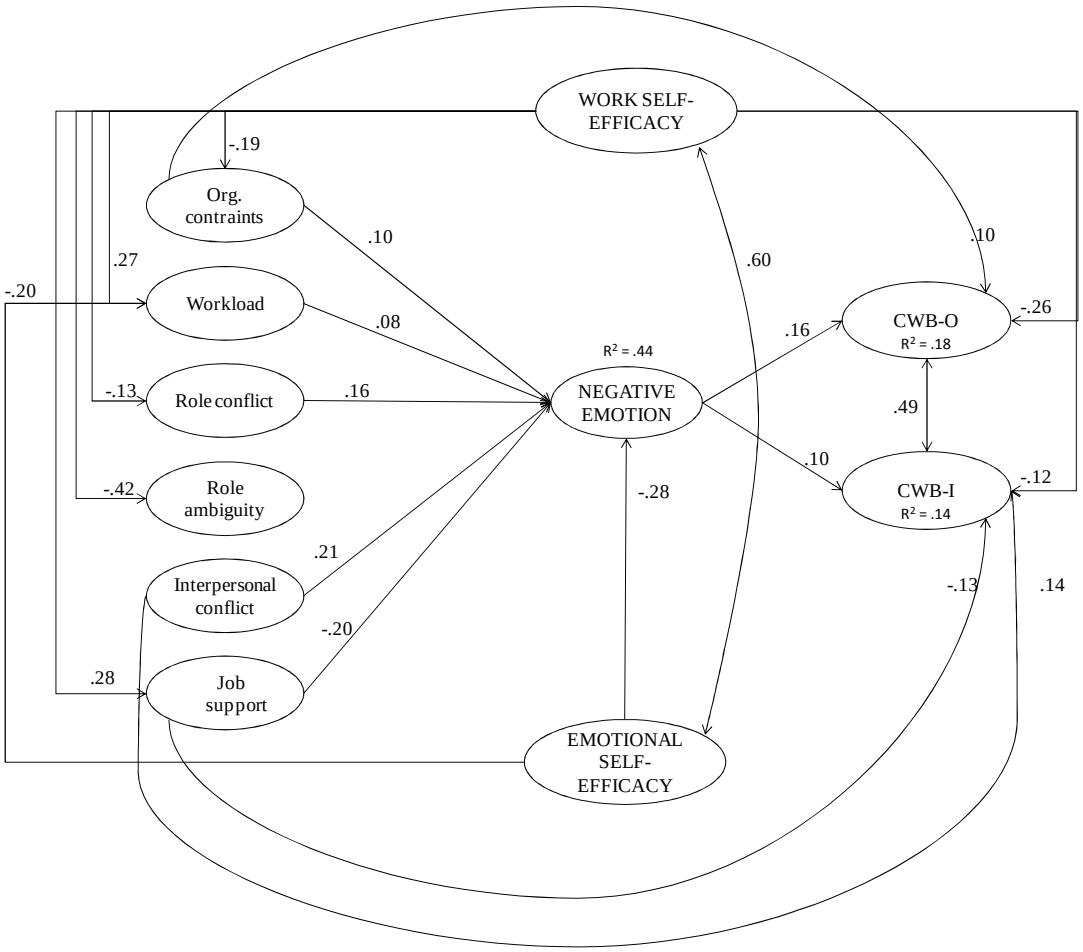
Figure 2. Results of the tested model: the additive role of self-efficacy. This figure illustrates the impact of work self-efficacy and emotional self-efficacy on all the variables included in the stressor-emotion model. In addition to the paths presented in the figure, please note that all stressors significantly correlated with each other (ranging from .11 to .50), the only exceptions being interpersonal conflict (that did not correlate with role ambiguity) and workload (that did not correlate with job support). The full set of correlations is available online.

Figure 3a. Results of the simple slope analysis: the moderation role of self-efficacy. This figure illustrates the relationships between specific pairs of variables included in the stressor-emotion model: stressors and negative emotions; stressors and counterproductive work behavior against individual (CWB-I). These relationships are presented for different levels of self-efficacy (SE: very low, low, medium, high and very high). For each effect the slope coefficient is provided.

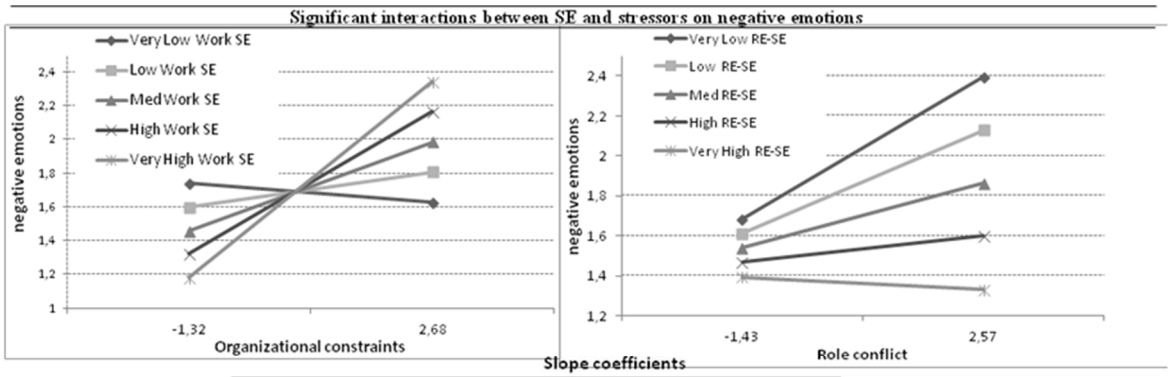
Figure 3b. Results of the simple slope analysis: the moderation role of self-efficacy. This figure illustrates the relationships between specific pairs of variables included in the stressor-emotion model: stressors and counterproductive work behavior against the organization (CWB-O). These relationships are presented for different levels of self-efficacy (SE: very low, low, medium, high and very high). For each effect the slope coefficient is provided



***Note*. + = expected positive relationship; - = expected negative relationship**

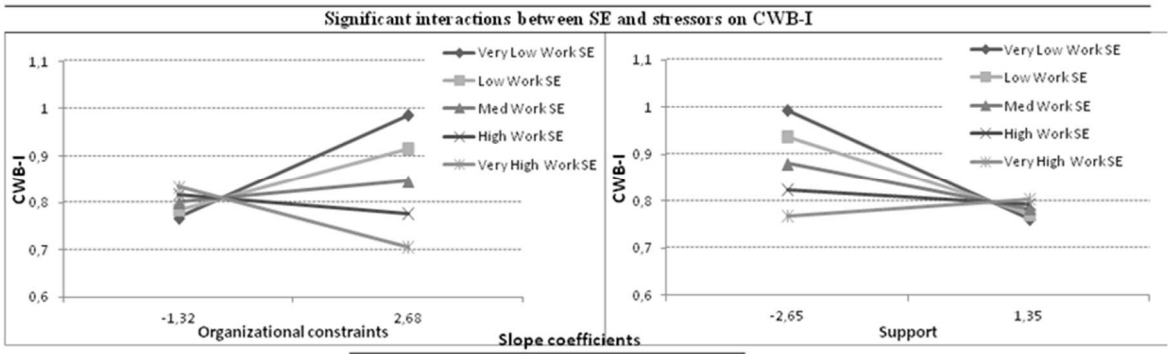


Note. CWB-I = counterproductive behavior toward individuals; CWB-O = counterproductive behavior toward organization



Slope coefficients

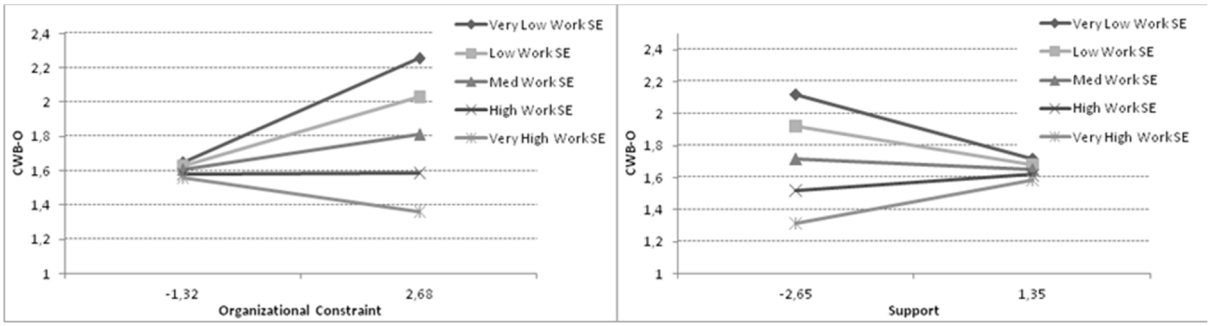
	Organizational constraints		Role Conflict
Very Low W-SE	-.03	Very Low RE-SE	.18**
Low W-SE	.05	Low RE-SE	.13**
Med W-SE	.13**	Med RE-SE	.08**
High W-SE	.21**	High RE-SE	.03
Very High W-SE	.29**	Very High RE-SE	-.02

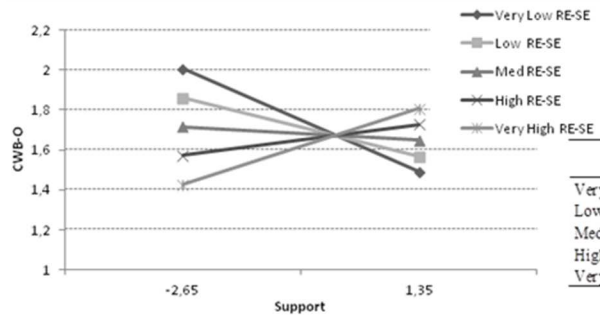


Slope coefficients

	Organizational constraints	Support
Very Low W-SE	.05**	-.06**
Low W-SE	.03**	-.04**
Med W-SE	.01	-.02**
High W-SE	-.01	-.01
Very High W-SE	-.03	.00

Note. * p < .05; ** p < .01; W-SE = work self-efficacy; RE-SE = regulatory emotional self-efficacy





	Org Constraint	Support		Support
Very Low W-SE	.15**	-.10*	Very Low RE-SE	-.13**
Low W-SE	.10**	-.06*	Low RE-SE	-.07*
Med W-SE	.05**	-.02	Med RE-SE	-.02
High W-SE	.00	.03	High RE-SE	-.04
Very High W-SE	-.05	.07	Very High RE-SE	.09*

Note. * p < .05; ** p < .01; W-SE = work self-efficacy; RE-SE = regulatory emotional self-efficacy

WORK SELF-EFFICACY

The following statements describe behaviors related to work. Carefully read each question and, using the scale below, indicate the score that best represents your degree of confidence in your ability to do each of things described.

Cannot do at all			**Moderately expect I can do**			**Very certain I can do**
1	**2**	**3**	**4**	**5**	**6**	**7**

When at work, I can:

____ 1. Overcome frustration if my superiors and/or my colleagues do not appreciate me as I would like (*)
Superare la frustrazione se i miei superiori e/o i miei colleghi non mi apprezzano come vorrei

____ 2. Understand the mood of my work colleagues
Capire l'umore dei miei colleghi di lavoro

____ 3. Express my opinion during work meetings
Esprimere la mia opinione durante le riunioni di lavoro

____ 4. Maintain control of myself in all circumstances (*)
Mantenere il controllo di me stesso in ogni circostanza

____ 5. Engage fully in activities I undertake to reach an intended goal (*)
Impegnarmi a fondo nelle attività che intraprendo sino a raggiungere gli scopi prefissati

____ 6. Overcome frustration related to my failures at work (*)
Superare le frustrazioni legate ai miei insuccessi lavorativi

____ 7. Convince others of my idea
Convincere gli altri delle mie idee

____ 8. Understand when a colleague is irritated with me
Capire se un collega è irritato con me

____ 9. Get all the information I need to do my job (*)
Procurarmi tutte le informazioni per svolgere il mio lavoro

____ 10. Defend my rights when I am mistreated
Difendere i miei diritti quando vengo trattato ingiustamente

____ 11. Keep my cool in times of stress and tension at work (*)
Mantenere la calma in situazioni di stress e di tensione sul lavoro

____ 12. Express what I think even if my colleagues disagree with me
Esprimere quello che penso anche quando i miei colleghi non sono d'accordo con me

____ 13. Stay focused when working (*)
Mantenere l'attenzione quando sto lavorando

____ 14. Understand the needs of colleagues, even if they do not state them explicitly
Capire le necessità dei colleghi, anche se non me ne parlano esplicitamente

____ 15. Defend my opinions even when they are different from those of others
Difendere le mie opinioni anche quando risultano diverse da quelle degli altri

____ 16. Seek information when I have some doubts about what I already know (*)
Cercare ulteriori informazioni quando ho dei dubbi su quelle che possiedo

____ 17. Not get disheartened following a heavy criticism at work (*)
Non scoraggiarmi in seguito a una pesante critica sul lavoro

____ 18. Respect schedules and work deadlines (*)
Rispettare sempre i tempi e le scadenze del mio lavoro

____ 19. Keep my cool when others treat me rudely (*)
Evitare di arrabbiarmi se gli altri si comportano male con me

____ 20. Organize my work even during unexpected events and emergencies (*)
Organizzare il mio lavoro, anche in presenza di imprevisti e urgenze

____ 21. Understand the mood of colleagues or superiors when we are involved in a deep discussion
Capire lo stato d'animo dei colleghi o dei superiori quando sono molto coinvolto/a in una discussione

____ 22. Avoid being irritated by wrongs that happen to me in my workplace (*)
Superare l'irritazione per i torti subiti nel mio lavoro

____ 23. Complete my work with high attention to detail (*)
Svolgere il mio lavoro con estrema precisione

____ 24. Defend successfully my rights when I get attacked unfairly
Difendere con successo i miei diritti quando vengo attaccato ingiustamente

____ 25. Intensify my efforts in times of trouble at work (*)
Intensificare gli sforzi nei momenti di difficoltà sul lavoro

____ 26. Put myself in the shoes of a work colleague who is in trouble
Mettermi nei panni di un collega di lavoro che è in difficoltà

Work efficacy: 5, 9, 13, 16, 18, 20, 23, 25

Regulatory emotional efficacy: 1, 4, 6, 11, 17, 19, 22

Empathic efficacy: 2, 8, 14, 21, 26

Assertive efficacy: 3, 7, 10, 12, 15, 24

Notes: An asterisk (*) indicates the items included in the present study.
Original Italian items are in italics