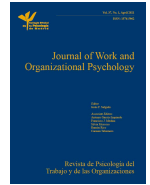




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## An Emergence Model of Team Burnout

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### A B S T R A C T

Because we work in teams more than ever, we should craft them fostering team members' motivation, wellbeing, and performance. To that aim, we propose a multi-level model explaining the emergence of team burnout, articulating the interplay between individual and team level mechanisms around ten empirically testable research propositions. Drawing from the JD-R theory, we formulated an emergence model of team burnout by combining team effectiveness and occupational health literatures. Our model explains how cycles of attention, information integration, and information-affect sharing on burnout cues foster the emergence of team burnout. It also explains how team burnout moderates the relationship between team structural variables and team members' burnout and how team burnout impairs team effectiveness through co-regulatory mechanisms. This model is timely because it addresses the importance of team burnout through a systematic effort connecting individual and team levels in explaining its emergence and the mechanisms through which it impairs team effectiveness.

### Un modelo de emergencia del *burnout* de equipo

### R E S U M E N

Dado que trabajamos en equipos más que nunca, debemos diseñarlos buscando la motivación, el bienestar y el rendimiento de sus integrantes. A tal fin, proponemos un modelo multinivel de emergencia del *burnout* de equipo, explicando la interacción entre mecanismos individuales y grupales en diez proposiciones empíricamente comprobables. Partiendo de la teoría de las demandas y recursos laborales, formulamos un modelo de emergencia del *burnout* de equipo combinando publicaciones sobre eficacia grupal y salud laboral. Este modelo explica cómo ciclos de atención, integración de información e intercambio de información y emociones sobre signos de *burnout* propician la emergencia de este fenómeno. El modelo también plantea que este modera la relación entre variables estructurales grupales y el *burnout* individual, además de deteriorar la efectividad grupal mediante mecanismos correguladores. Este trabajo es oportuno por dar importancia a este fenómeno al conectar los niveles individual y grupal que explican su emergencia y los mecanismos por los que deteriora la eficacia grupal.

#### Palabras clave:

Burnout de equipo  
Teoría de las demandas y recursos laborales (JD-R)  
Teorización multinivel  
Emergencia  
Eficacia grupal

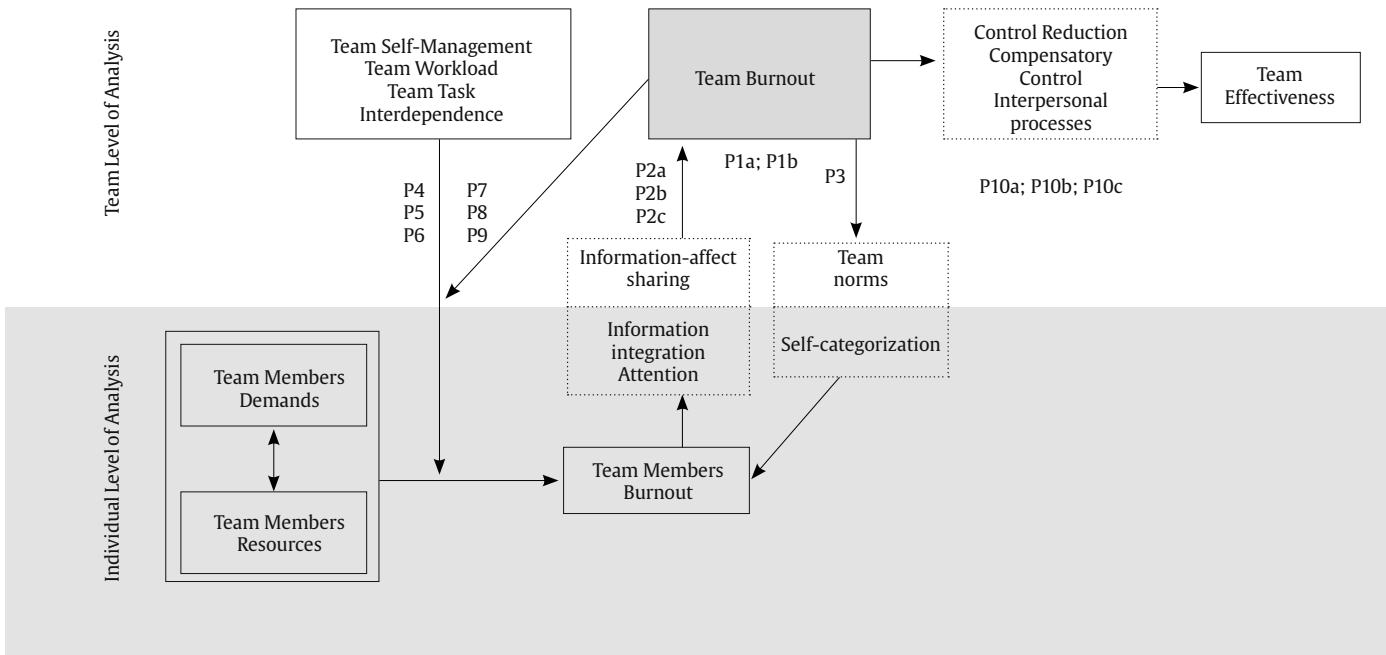
The so called fourth industrial revolution (Schwab, 2017) is inoculating an accelerated, multifaceted, and technologically driven change (Rico, et al., 2020) in which organizations are addressed by using teams (collectives who exist to perform organizationally relevant tasks, share common goals, interact socially, exhibit task interdependence, maintain and manage boundaries, and are embedded in an organizational context; Kozlowski & Bell, 2012, p. 334) instead of individuals as their basic structural units (Rico et al., 2017; Mathieu et al., 2017; Tannenbaum et al., 2012). Despite the benefits of teamwork (West, 2012), the Sixth European Working Conditions Survey (Eurofound, 2017) reported that teams increase work intensity and the likelihood of emotional demands associated

with adverse social behaviors. Hence, team-based organizations create new job demands facilitating the emergence of burnout (the response to long-term high job demands alone or combined with low resources; Demerouti et al., 2001) in teams.

The magnitude of the issue is not small, as the average burnout levels reported by European employees is 3.10 on a 5-point scale (Schaufeli, 2018). Burned-out employees are 63% more likely to take a sick day off, 50% less likely to discuss about meeting their goals, and 13% report reduced confidence in their performance (Wigert & Agrawal, 2018). Only in the United States of America burnout is associated with employee turnover rates of 20 to 50% and has an estimated healthcare cost of \$125-190 billions per year (Borysenko, 2019).

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**Figure 1.** Team Burnout Emergence Model

One of the most broadly accepted models explaining individual burnout is the Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2007, 2017; Demerouti, et al., 2001). This model predicts that individual performance is achieved or hindered through job demands (e.g., workload) via burnout and by job resources (e.g., peers support), which connect to job results through engagement. Thus, individual burnout is generally defined as the response to long-term high job demands alone or combined with low resources, and consists of two core dimensions: exhaustion and disengagement (Demerouti et al., 2001; Hoonakker et al., 2013). Thus, we depart from the JD-R theory to examine both the conditions and dynamics through which burnout emerges at team level, and the key interactions between individual and team burnout to predict team effectiveness.

Drawing from JD-R theory, Bakker et al. (2006) demonstrated that collective burnout, as an aggregated score of individual measurements and defined as a “collective mood” (p. 466), occurs and exerts a direct impact on individual burnout (Meredith et al., 2020; Westman et al., 2011). Along the same lines, earlier studies already addressed teams as the basic units for studying burnout (Peiró, 2001; Weaver et al., 2001) and define it as the part of the stress experience that employees performing the same job could have in common (Semmer et al., 1996) that easily spread between them while carrying out their tasks (Edelwich & Brodsky, 1980). In line with this assertion, emotional contagion is the most accepted mechanism through which burnout emerged at the team level (Bakker et al., 2006) as a result of individuals sharing the same work context (González-Morales et al., 2012). These developments fueled some team level research efforts that considered burnout as: (a) the consequence of team members sharing moods as a result of emotional contagion, (b) an aggregated score from individual measurements, (c) comprised by the same dimensions of individual burnout (i.e., exhaustion and disengagement), and (d) negatively related to team effectiveness (Consiglio et al., 2013; Denerecke et al., 2013; Li et al., 2014; Lin & Huang, 2014; Willard-Grace et al., 2014). Thus, team burnout can be defined as team members’ collective experience of chronic exhaustion and negative attitudes towards work (Garman, et al., 2002).

Despite these former efforts to explain team burnout, further conceptual integration is necessary to build a theory that explains team burnout emergence and its interrelations with individual

burnout, a theory that embraces the multilevel imperatives of current work settings and articulate an agenda for research in team burnout. Accordingly, the present paper firstly clarifies individual and team level mechanisms resulting into team burnout emergence. In this regard, instead of assuming extant research suggestions that all members equally contribute to team burnout emergence (i.e., compositional emergence; Kozłowski & Klein, 2000), we explore the possibility that team members contribute differently to the emerged phenomenon (i.e., compilation emergence; Kozłowski & Klein, 2000). Secondly, our manuscript describes how emerged burnout further relates to individual burnout and team effectiveness. In so doing, we characterize how team requirements interact and influence individual (i.e., team members) burnout.

Through addressing the former issues and drawing from the JD-R theory, we develop a model that focuses on how the interplay of individual (e.g., attention) and interpersonal processes (i.e., information sharing) results in team burnout emergence. In doing so, we account for the role that salient team characteristics (e.g., team task interdependence) exert on the individual demands/resources balance and on the team members burnout experience. The model also explains how team burnout will relate to team members burnout and via what mechanisms the former impacts on team effectiveness (see Figure 1).

Overall, our manuscript firstly contributes to generalizing multilevel theory-building in organizational psychology; in particular, the testable propositions included in our model pave the way for future multilevel and team level research on burnout and provide a more complete and nuanced approach to analyze its effects over team effectiveness. Secondly, this work contributes by extending JD-R theory to team level of analysis and outlining how the resulting multilevel relationships between team and individual burnout can be understood. Specifically, the model clarifies how individual and interpersonal processes interplay resulting in team burnout via compilation emergence (González-Romá, 2011; Kozłowski & Klein, 2000), how team burnout alters individual burnout directly and indirectly, through influencing the perception of team structural characteristics, and by what means team burnout relates to team effectiveness. Finally, from an applied point of view, this model offers a more refined understanding of team burnout

implications that will help managers and team members to prevent and early correct its consequences over team and organizational effectiveness.

### The Proposed Model

Up to now, exploration of team burnout has mainly focused on evidencing the parallelisms between team and individual burnout models (Consiglio et al., 2013), and on the crossover relationships of team and individual burnout (Meredith et al., 2020). Also, research on team burnout uncovered the effect of some team resources on individual burnout (Li et al., 2013; Willard-Grace et al., 2014) and the moderating role of other team emergent states (e.g., team cohesion) in the team antecedents-individual burnout link (Westman et al., 2011). However, these research efforts, although informative, are not enough to explain team burnout emergence and its multilevel nature as an extension of the JD-R theory (Bakker & Demerouti, 2017). To do so, core variables and processes involved in team burnout emergence shall be identified, operationalized, and justified. In particular, a model of team burnout emergence has to specify the individual-level concepts important to burnout development as well as the mechanisms through which those concepts relate in order to unfold team burnout. As the nature of emergence recognizes dynamic processes (e.g., feedback), once team burnout emerges it could further influence individual-level variables and team-team members relationships (Grand et al., 2016, p. 1355).

Thus, we articulate our model (Figure 1) by first clarifying the concept and dimensionality of team burnout followed by the analysis of the emergence process through describing bottom-up and top-down effects. Then, our model considers the top-down effects that three team-level structural variables essential for teamwork (i.e., team self-management, team workload, and team task interdependence) play on team members burnout, based on whether these are perceived as additional demands or not. In addition, our model includes a temporal logic by mean of which it analyses the potential moderating role of emerged team burnout in the team structural variables-team members' burnout relationship. Finally, the last section specifies a set of explanatory mechanisms that accounts for the impact of emerged team burnout on team effectiveness.

### Definition and Dimensions of Team Burnout

We draw on the scarce empirical work on team burnout (e.g., Bakker et al., 2006; Consiglio et al., 2013) to define it and characterize its dimensional nature. Overall, extant research reveals the existence of a meaningful team-level burnout construct, explaining a unique variance (16%; Li et al., 2013) over individual burnout. In these studies, team burnout results from the aggregation of individual scores, emphasizing the convergence of team members' perceptions, moods, and behaviors as a direct consequence of working in the same team (Salanova et al., 2011). Accordingly, team burnout was early characterized as a collective mood (Bakker et al., 2006). Concerning the compositional dimensions of team burnout, we shall consider how the dimensions of individual burnout have been contemplated at team level. As such, individual burnout is argued to be composed by three dimensions: (a) exhaustion, or a work-related stress reaction (lack of energy, fatigue), (b) psychological distance from work or disengagement (withdrawal, lack of motivation), and (c) reduced professional efficacy (unfulfillment of job responsibilities; Bakker et al., 2002). However, research has shown that the latter dimension largely develops independently from exhaustion and distance from work and, therefore, it is usually excluded from the definition of burnout (Demerouti et al., 2001; Demerouti et al., 2010; González-Romá et al., 2009). Analogously, the scarce literature on team burnout

identifies the shared experiences of exhaustion and disengagement as its two main compositional dimensions (Garman et al., 2002; González-Morales et al., 2012; Westman et al., 2011).

Thus, as team members operate under the working conditions delineated by the structural and interdependence imperatives of teams, team burnout can be defined as team members' compatible cognitive representations and affects in chronic exhaustion (multiple team members lacking in energy), and disengaged attitude towards work (multiple team members showing lack of commitment), triggered and maintained by sustained exposure to overdemanding working conditions (Garman et al., 2002). Accordingly, we conceptualize team burnout as an emergent state comprising cognitive, affective, and behavioral components, which impairs team processes and reduce team effectiveness (Naumann & Bennet, 2002; Tesluk et al., 1999; Waller et al., 2016). Then, cognition, affects, and behaviors associated to team burnout contribute to the development of a negative interpretation of the team circumstances resulting in team members losing their capacity to maintain an intense involvement to exert a meaningful impact at work (Kozlowski & Ilgen, 2006).

In clarifying this conceptualization, we acknowledge first that compatible mental representations refer to different knowledge domains, such as the team, its task and context (Grand et al., 2016; Mohammed et al., 2021). Such compatibility does not mean identical cognitive representations (Cronin et al., 2011; Kozlowski & Klein, 2000). For example, several team members could show compatible disengagement perceptions about their task, despite presenting different degrees of convergence about them (Mohammed et al., 2021). The affective component of burnout accounts for team members' tendency to align their cognitions and affective responses developed from observable team characteristics (González-Romá et al., 2000; Ostroff et al., 2013). Thus, team members converging on a perception of disengagement are more likely to display discouragement and pessimistic emotions (Bakker et al., 2011). In this line, burnout affective component captures the persistence and reinforcement of team members' negative emotions whenever they think and talk about their team or because task interdependencies prompt these emotions because their interaction (Menges & Kilduff, 2015). Our conceptualization of team burnout also recognizes burned out team member behaviors and their variability. Thus, team burnout magnitude will be associated to the number and frequency of team members showing burned out verbal and behavioral expressions (DeRue et al., 2012).

Looking for additional convergent empirical evidence in the few empirical studies regarding team burnout effects, we find a consistent negative relationship of team burnout with team outcomes such as job satisfaction and team performance (Bakker & Demerouti, 2017; Consiglio et al., 2013; Van Bogaert et al., 2014). Also, empirical evidence regarding interventions to reduce team burnout following JD-R theory (Bakker & Demerouti, 2017) offers support to the existence of team burnout by showing that team-based interventions changing job demands and resources in teams reduced their burnout levels (Le Blanc et al., 2007). Thus, in this paper, we consider team burnout as a negative emergent state comprising of a cognitive, affective, and behavioral component, which impairs team effectiveness (Naumann & Bennet, 2002; Tesluk et al., 1999; Waller et al., 2016). Accordingly, and acknowledging that more research is needed to further settle the team burnout concept and its dimensionality, we propose that (see Figure 1, central part):

*Proposition 1a:* A team could be categorized as burned out when multiple team members hold on compatible cognitive representations, affects, and behaviors concerned with exhaustion and disengagement.

*Proposition 1b:* Team burnout consists of two dimensions: exhaustion and disengagement.

## Team Burnout Emergence

The process of emergence captures how team level constructs are collectively developed via team members' interactions (Cronin et al., 2011). Team burnout can be studied as an emergent state as it constitutes a cognitive, affective, and behavioral dynamic property of some teams (Marks, et al., 2001). The study of any emergent team construct requires a multilevel approach because its emergence is rooted in team members' interactions (Morgeson & Hofmann, 1999). Accordingly, multilevel theorization (Chan, 2019; Kozlowski et al., 2013) differentiates between the emergence process, focused on the interactions among lower-level elements of the system (bottom-up effects), and the emerged construct resulting from such interactions, which once emerged will influence lower-level elements (top-down effect). In our case, team burnout will emerge from team members sharing cues of exhaustion and disengagement verbally and/or behaviorally, while emerged team burnout becomes a new team property, different from individual burnout, which influences other team processes and outcomes, and reciprocally individual team members (Grand et al., 2016; Waller et al., 2016).

Although there are several socially induced individual and interpersonal processes potentially relevant for team burnout emergence, such as self-concept or reinforcement, we focus on attention, information integration, and information-affect sharing. We do so because individual processes, such as attention to teamwork conditions and peers' reactions and the subsequent meaning construction through integrating that information into congruent schemas, are cognitions individually elaborated within the social context teams representation (Grand et al., 2016). Thus, attention and information sharing about team conditions and/or peers' moods and behaviors are the key individual and interpersonal mechanisms driving the bottom-up emergence of team burnout.

Team members differently contribute to team burnout development due to personal interpretations of the team task and its context, and the amount of demands and resources these require or provide. Accordingly, our focus is placed on team members' differential involvement throughout the emergence process (compilation emergence; Kozlowski & Klein, 2000). Hence, team burnout emergence will reciprocally influence team members' burnout through a top-down process that provides contextual cues and norms for interpreting and identifying with the team, its task, and context (Hackman, 2002; Turner & Reynolds, 2001). Let's devote the next subsections to elaborate both the bottom-up and top-down processes through which burnout emerges and exert its effects on teams.

### Bottom-up Influence of Individual Interactions on Team Burnout Emergence

Team burnout emergence starts, at least with one team member describing his/her team as exhausting and disengaging and completes when a significant number of them agrees on such team perception. There are certain individual and interpersonal mechanisms driving team burnout emergence.

**Individual mechanisms.** These mechanisms refer to attention and information integration as cognitive mechanisms that activate/inhibit and help organizing available stimuli from the team task and context (Grand et al., 2016). Team members generally focus their attention on the information available in the team task setting, considering its importance for their tasks and goals (Grand et al., 2016) and their well-being. Thus, any distinctive information stimuli related to tasks, goals, and well-being will be attended and integrated.

Team members' attention and information integration can be influenced by previous work experiences, commitment to team goals, or existing affective states (Forgas & George, 2001). So, team members

will contribute differently to team burnout emergence based on these characteristics. In this regard, personal or vicarious experiences of exhaustion and disengagement will make certain stimuli more salient in the current task setting increasing its likelihood to be processed. Also, the more increased the team members commitment to their team goals, the higher the salience of exhaustion and disengagement cues potentially threatening the attainment of those goals, facilitating negative affectivity such as frustration or even fear (Kooij-de Bode et al., 2010). Ironically, in accordance to affect infusion logic (Forgas, 1995), the more negative the team members' affectivity, the more their attention will focus on task setting negative stimuli, such as exhaustion or disengagement cues.

Then, all that information and cues are organized and interrelated into categories and burnout cognitive representations through which team task and working conditions, other team members' behaviors, and own experiences are constructed and interpreted (Grand et al., 2016; Salancik & Pfeiffer, 1978). All this information and affect processing will result in varied beliefs and moods, such as the necessity of working harder to compensate other team members' exhaustion, disengagement, or energy depletion due to frustration (Hockey, 2013; Simms & Nichols, 2014). Consequently, as Figure 1 (central part) shows:

*Proposition 2a:* Team burnout will emerge through directing individuals' attention to available burnout stimuli and then through integrating that information into the cognitive representation of burnout. This burnout cognitive representation will also trigger compatible negative affectivity and behavior.

**Interpersonal mechanisms.** Once burnout beliefs and affects are installed in some team members, they begin to share them through their reciprocal communications. Team members share information either through verbal statements and non-verbal signals, such as gestures, facial expressions, or avoiding eye contact (Grand et al., 2016; Salancik & Pfeiffer, 1978). According to multilevel (Kozlowski & Klein, 2000) and emergent team process theorization (Grand et al., 2016), for team burnout to emerge it is necessary that team members share viewpoints on team task, team context, exhaustion, and disengagement and to show burnout cues in order to minimally converge into a compatible cognitive representation. These team members' interactions will reciprocally reinforce the expression of burnout information and crystallize burnout as a team state.

Further, team members' interactions will also share affects in the team through implicit and explicit mechanisms (Ilies et al., 2007). Implicitly, the mere presence of some individuals conveying non-verbal burnout cues will be sufficient to elicit similar reactions in other team members through emotional contagion (Hatfield et al., 2009) and behavioral entrainment (McGrath & Kelly, 1986). These mechanisms allow team members to automatically synchronize facial, vocal, and postural expressions from others, and update team members' self-perceptions based on expressive behaviors (Bakker et al., 2009). Explicitly, sharing burnout messages will influence team members via emotional comparison (Barsade, 2002) and intentional affective induction (Barsade & Gibson, 2007). Both mechanisms will contribute to assessing the emotional information circulating on the team as coherent with exhaustion and disengagement, which will ease understanding of such affective state, even if some members are not feeling exhausted and disengaged at that particular time (Gump & Kulik, 1997). Consequently, we surmise that (Figure 1, central part):

*Proposition 2b:* Team burnout will emerge as a result of team members' reciprocally sharing verbal and non-verbal information on burnout either through implicit or explicit mechanisms.

Compilation emergence implies that team members contribute with different frequency and type of behaviors to team burnout (Kozlowski & Klein, 2000). Thus, recurring cycles of attention to burnout cues, meaning construction and information and affect sharing carried out by various team members over time facilitate the emergence of team burnout. As a result, a majority of team



members develop a compatible view on the negative consequences of high demands combined by low resources, such as exhaustion and disengagement that lead to categorizing their team as burned out. The fact that the majority are not “all” and/or “always”, is also important for the team to be able to change and evolve (DeRue et al., 2012; Kozlowski & Chao, 2012). Compared to compositional emergence (Kozlowski & Klein, 2000), which defends that all team members contribute in a similar way to team burnout emergence, compilation emergence seems more realistic in a work setting (González-Romá, 2011). Thus, the proposed mechanisms (attention, meaning construction, information-affect sharing) point to team burnout as a configural property of a team, since every and each member do not contribute equally to team burnout either in the same form (e.g., showing disappointment or withdrawal) or amount (e.g., frequency of eliciting burnout cues). As a result, compilation team burnout emergence emphasizes variation of contributions (Kozlowski & Chao, 2012; Kozlowski & Klein, 2000; González-Romá, 2011). Hence, team members will display compatible (but not equal) burnout levels, cognitive representations and congruent behavioral and affectivity patterns (Haslam et al., 2009; Salanova et al., 2011). Accordingly, (Figure 1, central part):

*Proposition 2c:* Team burnout results from compilation emergence since not all team members equally contribute to that team state in the same degree, at the same time.

### Top-down Influence of Team Burnout on Individual Burnout

Team members' cognitions, affects, and behaviors generating a team emergent process are subsequently affected by the emerged process (Cronin et al., 2011). In this regard, the multilevel theory (Kozlowski & Chao, 2018; Kozlowski & Klein, 2000) posits that higher levels of a system exert a direct effect on lower levels, shaping relationships and processes, and serve as a control mechanism to maintain team viability (Hackman, 1992; Turner & Reynolds, 2001).

In line with this logic, social influence and specifically social norms function as the main top-down mechanism through which team burnout activate, maintain, or increase individual burnout (Salancik & Pfeffer, 1978; Turner & Reynolds, 2001). Social norms shape individuals reasoning and expectations on what is consider appropriate in that team (Salancik & Pfeffer, 1978), thus, describing and prescribing how individuals should act while in the team and/or when acting as a member of that team. When individuals think of themselves as team members, they will apply team attributes to define themselves and will even modify their individual mood towards the team' stereotypical one (Moons et al., 2009). Therefore, when team burnout emerges team members tend to adjust their cognitions, affect, arousal levels, and behaviors to that perceived team state, particularly when their team identity is salient (Bakker et al., 2006; Hackman, 1992). This adjustment is the most adaptive behavior since all attempt to resist or confront team norms will require a surplus of energy unavailable in a burned out team (Baumeister et al., 2007).

These claims can be empirically supported by studies reporting that negative social context and norms play an important role in developing individuals' burnout (Espinoza-Díaz et al., 2015; González-Morales et al., 2012). Similarly, Ten Brummelhuis et al. (2014) report that negative team conditions defined by a team competition norm shape individual burnout by transferring negative emotions and showing unsupportive behavior. Studies on team interventions (e.g., Le Blanc et al., 2007) provide additional support for this top-down influence, showing that team burnout reduction, through developing a social norm of support, also reduce team members' feelings of exhaustion. Thus, emerged team burnout functions as a specific team variable which influences team members' behavior by providing the normative context where their cognitions, affects, behaviors, and

social interactions take place (Johns, 2006). Considering the above rationales, we propose (Figure 1, central part):

*Proposition 3:* Team burnout exerts a direct positive top-down influence on individual burnout through developing social norms which guide team members affect and behavior in a compatible way with a burned-out state.

### The Role of Team Structural Conditions

Teams facilitate individuals' performance and satisfaction (Ritcher et al., 2011). But teams also impose complex and ambiguous requirements on their members by requiring from them a variety of skills and interactions to perform multiple tasks and even in multiple teams at the same time (Kozlowski & Ilgen, 2006; Rico et al., 2017). As such, team structural characteristics conform a context that is also strongly related to burnout (Burke et al., 1984; Maslach & Jackson, 1984).

Teams' literature recognizes certain structural characteristics such as self-management (Burke et al., 2006; Campion et al., 1996; Rico et al., 2020), team workload (Elloy et al., 2001; Eurofound, 2017; Funke et al., 2012), or task interdependence (Campion et al., 1996; Rico et al., 2008) as key team level properties set by the organization. Because these team structural characteristics could alter the balance between team members' demands and resources, they may relate with members burnout via a top-down influence (Cronin et al., 2011; Kozlowski & Klein, 2000), moderating the relationship between job conditions and team members burnout. Our model also posits that, once emerged, team burnout will reinforce team members' perception of team structural variables as additional demands, subsequently being able to modify the relationship between demands and resources and increase team members burnout levels. Let's explain in detail these moderating effects in the following subsections.

#### The Moderating Effect of Team Structural Conditions on the Relationships Between Individual Demands and Resources and Individual Burnout

**Team self-management.** This structural variable induces on teams a degree of autonomy that enable them to make decisions without consulting to their leaders (Hackman, 1987). Thus, team members control the provision and execution of complete sets of tasks, train their members, continuously improve their area of responsibility, and manage rewards and recognition (Banker et al., 1996; Renken, 2018). Through activating the sense of responsibility, team members engage themselves on team tasks and objectives (Burke et al., 2006). Moreover, these teams are also capable of dealing with contingencies that could occur over time through adapting their actions to non-planned or new team demands (Burke et al., 2006; Rico et al., 2020). Consequently, and also following what JD-R theory postulates (Bakker & Demerouti, 2017), team self-management can be considered a resource for their team members.

Conversely, some teams could experience such decision latitude as a “burden” delegated by their superiors, well above their paygrade. This claim can be found in studies underscoring how traditional tasks carried out by managers were delegated to teams in order to increase productivity relegating employees' well-being (Rinehart et al., 2018). This experience of burden also finds support in the “too-much-of-a-good-thing” effect (Pierce & Aguinis, 2013) and the vitamin model (Warr, 1994). Accordingly, some studies have found that high levels of positive job characteristics can be perceived as hindrance stressors (Naseer et al., 2020).

Thus, the more the team assesses their level of self-management as adequate to fulfil their members' needs of autonomy and responsibility and an enabler for team success, the more team self-management will be considered a team resource. However, if team

self-management is perceived beyond the team knowledge, expertise, or its decision latitude, it will be assessed as a team demand (Geerts et al., 2021), and could alter the relationship between team members demands and resources and the burnout experience of some team members. From the above mentioned, we propose (Figure 1, left part):

*Proposition 4:* The more team self-management is assessed as a demand, the higher the possibility of reinforcing the positive relationship between team members' demands/resources imbalance and team members' burnout.

**Team workload.** Team tasks comprise what teams have to do, becoming the main source of goals attainment and task-based exchanges among team members (Kozłowski & Ilgen, 2006). In every team, it is expected from its members to carry out the tasks that they have assigned, such as making decisions or develop solutions to task-driven problems (McGrath, 1994). Then, team workload can be defined as the relationship between the team performance capacity and the number of tasks placed over such team (Bowers et al., 1997).

Even considering a balanced team workload with fairly distributed tasks among team members, such workload may change due to team members' errors (Mazur et al., 2014; Sexton et al., 2000), low quality (Christensen et al., 2021), or by causes beyond team members' control (Porter et al., 2010), such as suppliers' issues, machinery breakdown, or significant changes in clients' orders or company procedures. When one or both situations occur, team members will use team's latitude to assess how to proceed. If the change seems punctual (e.g., deal with errors), team members may cope in a quantitative way with the change, that is, through increasing the resources devoted to fulfilling their tasks, via some team members performing the additional tasks. But if the change persists, they will need to cope with the change in a qualitative different way, such as through workload redistribution (e.g., role reassignment; LePine, 2005). The effort of redistributing workload may make teams persist in coping quantitatively with the change (Schippers et al., 2015). Therefore, the risk of workload imbalance will increase and exacerbate individual team members' burnout because the excessive task demands placed on some of them.

Thus, the better the team tasks are adjusted to team capacity, the lower the likelihood of inducing individual burnout due to team members having enough resources to deal with their workload (Bliss & Fallon, 2003). However, if team workload becomes unbalanced and the team does not start actions to rebalance its workload, team members assuming higher task demands will experience individual burnout. Accordingly, we surmise that (Figure 1, left part):

*Proposition 5:* The more team workload is assessed as a demand, the higher the possibility of reinforcing the positive relationship between team members' demands/resources imbalance and team members' burnout.

**Team task interdependence.** It refers to the degree to which team tasks require team members to interact and coordinate themselves for its effective accomplishment (Courtright, et al., 2015; Rico et al., 2008). Specifically, team task interdependence occurs when team members require information, knowledge, or advice as well as physical assistance and/or equipment from other team members to successfully complete their tasks (Van der Vegt & Bunderson, 2005).

Team task interdependence may occur symmetrically when similar levels of cooperation and assistance from all team members are required to perform team tasks (Bachrach, et al., 2006). However, certain conditions regarding the team task (e.g., dealing with critical tasks) or its members (e.g., working with newcomers) could create task interdependence asymmetries. In such cases, team members do not equally depend on one another to complete their tasks (de Jong et al., 2007). In addition, higher interdependent members pay more attention to less interdependent members' actions, whereas such lower interdependent members are less motivated to attend to higher interdependent members' needs, resulting in reduced support and assistance to others (Fiske & Berdahl, 2007). Accordingly, highly interdependent team members may experience

burnout because they cannot ensure they will receive the necessary assistance from other team members to fulfil their tasks. Hence, we surmise that (Figure 1, left part):

*Proposition 6:* The more team task interdependence is assessed as a demand, the higher the possibility of reinforcing the positive relationship between team members' demands/resources imbalance and team members' burnout.

### The Moderating Effect of Team Burnout on the Team Structural Variables-Individual Burnout Relationship

Defining team burnout as multiple team members' compatible cognitive representations and moods on chronic exhaustion and disengaged attitude towards work (Garman et al., 2002) implies that team burnout will condition team members' appraisal of the effect of team structural variables on team members' individual burnout. Thus, if team members compatibly assess their team as burned-out, then team self-management, team workload, and team task interdependence will be more likely considered as sources of excessive job demands. Although extant research offers limited guidance to support these specific relationships, some indirect support can be borrowed from the study of team climate (e.g., job insecurity or safety climates) and its moderating role between team and individual variables (e.g., Hoffman et al., 2003; Sora et al., 2013; Van Vianen et al., 2011).

In this regard, it could be expected that when team members mainly perceive their team as burned out, this negative cognitive and affective state will cause that even the most optimal team self-management arrangement could be assessed by such team members as "too much" responsibility on duties that should be carried out by their leaders and/or other departments (Rinehart et al., 2018). Thus, team burnout will increase the likelihood of team members perceiving team self-management as a demand, which in turn will enhance members' burnout through altering the relationship between demands and resources. Conversely, and even though any level of team burnout perception could be negative, when team members mainly agree on perceiving low team burnout levels, it will not exert any additional influence on the previous effect of team self-management on the relationship between team members demands and resources and their experienced burnout levels. Thus, we submit that (Figure 1, central part):

*Proposition 7:* If team burnout is perceived as high, it will reinforce the moderating positive effect of team self-management on the relationship between team members' demands/resources imbalance and team members' burnout.

Similarly, if team members perceive their team as burned out, even under the best fit between team capacity and team workload, the latter could be assessed as "too high", because team members will be engaged in slower pace of working, making more errors, or even going absent from the workplace (Tucker et al., 2009). These negative or even counterproductive work behaviors will cause delays and conflicts postponing tasks being performed on time or with the required quality level (Mercado et al., 2018). This circumstance will raise pressure for task completion on delayed team members and/or cause diligent members to increase their work pace to help meeting team deadlines (Barnes et al., 2008). Within a burned-out team, helping behaviors will be reduced (Spitzmuller et al., 2018), further hindering the balance of individual workloads increasing the chances of those members which have to deal with higher workloads to experience burnout.

Alternatively, if team members compatibly perceive low team burnout levels, team workload shall not be understood as an additional pressure. Thus, if workload becomes unbalanced, some team members may allocate personal resources to the team task directly or apply them to identify and communicate that incipient imbalance (LePine, 2005). Then, the team will analyze the situation

and decide the best course of action based punctual (i.e., helping behavior) or more permanent action (i.e., workloads re-balance). From the above mentioned, we propose (Figure 1, central part):

*Proposition 8:* If team burnout is perceived as high, it will reinforce the moderating positive effect of team workload on the relationship between team members' demands/resources imbalance and team members' burnout.

Lastly, if team members mostly perceive their team as burned out, team task interdependence will intensify the sense of lacking control to complete the assigned part of the job importantly depending on other team members' resources. The lack of concern from those less interdependent on the more interdependent may delay team tasks accomplishment (Fiske & Berdahl, 2007). Further, such more interdependent team members will intensify contacts with their team peers seeking for proper support on their own part of the task (Giebels et al., 2000). The combination of a sense that the needed advice is not going to be available, with deadlines that are going to be missed, and the intensification of requests to other team members, could easily derive into task and interpersonal conflict (Langfred, 2007; Lee et al., 2015). Hence, in a burned-out team, team task interdependence will be assessed as an additional demand that will activate or intensify team members' burnout via altering their demands/resources balance. Consequently, we propose (Figure 1, central part):

*Proposition 9:* If team burnout is perceived as high, it will reinforce the positive relationship of team task interdependence on the relationship between team members' demands/resources imbalance and team members' burnout.

### Team Burnout and Team Effectiveness

The few studies addressing the team burnout-team effectiveness link (i.e., team level of performance and team capacity to develop and regenerate itself; Tannenbaum et al., 1996), consistently report a negative relationship with team effectiveness markers, such as absenteeism or quality of service (Consiglio et al., 2013; Van Bogaert et al., 2014). However, such research does not analyze how team burnout specifically impairs team effectiveness. Teams need co-regulatory mechanisms to align members' behaviors towards common goals and standards (Baumeister, 2002), ensuring the right functioning of team processes (i.e., team members activities that "direct, align, and monitor taskwork"; Marks et al. 2001, p. 357). According to our former reasoning, team burnout emergence hinders team processes, which ultimately impair team effectiveness. Thus, burned out teams will struggle to execute the required actions needed to achieve their outcomes, due to failures in co-regulatory mechanisms (Tamminen & Crocker, 2013), such as compensatory control and control reduction, which may help teams to cope with an overdemanding situation. Thus, in a burned out team, compensatory control allows team members to agree upon reducing the level and/or the quality of their common goals. Additionally, control reduction undermines the team ability to keep its work under control, impairing team coordination (Chen & Kanfer, 2006; Hockey, 1997; Wieber et al., 2015).

To better understand how both co-regulation mechanisms impact team effectiveness by altering different team processes, we shall refer to Marks et al.'s (2001) multiphasic model that describes team processes nested in transition (where teams focus on planning and/or goal directed activities; e.g., planning) and action phases (where teams perform activities leading directly to goal accomplishment; e.g., team monitoring and backup responses) within task episodes. Connecting this multiphasic perspective of team task processes with the above co-regulation mechanisms, it could be argued that during transition phases team compensatory control impairs team transition processes by making teams adjust their performance goals by pursuing less

ambitious team outcomes (Baumeister, 2002; Hockey, 1997) and hindering planning and activities prioritization. Hence, team goals will be readjusted in line with what most members can perform since they are experiencing low levels of energy and motivation, while during action phases control reduction mechanisms driven from multiple members sharing a sense of exhaustion and disengagement will decrease the influence that teams exert over action processes such as monitoring progress towards goals, backup behaviors, and coordination (Kanfer & Kerry, 2011; Marks et al., 2001).

Team burnout also impacts team transition and action phases through impairing team interpersonal processes, which provide the necessary interpersonal interaction through empathic, supportive relationships, and prosocial behaviors (Batson, 2011; Kalish et al., 2015; Marks et al., 2001). Team members' exhaustion and loss of motivation characterizing team burnout reduce positive interpersonal interactions and team ability to process unique team members' information, which ultimately impair key team outcomes, such as team decision quality (De Dreu et al., 2008). Likewise, team burnout increases negative interpersonal contacts such as strong disagreement and/or frequent demotivational remarks (Zaki & Williams, 2013), which chronifies interpersonal conflict that reduces team effectiveness (Marks et al., 2001).

Although more research is required, considering the available evidence above, we state that (Figure 1, right part):

*Proposition 10:* Team burnout is negatively related to team effectiveness through compensatory control impairing team transition processes (10a) and through control reduction impairing team action processes (10b). Likewise, team burnout is negatively related to team effectiveness through impacting team interpersonal processes (10c).

### Discussion

Drawing from JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti et al., 2001), collective stress literature (Peiró, 2001; Weaver et al., 2001), team multilevel frameworks (e.g., Cronin et al., 2011; Kozłowski & Klein, 2000), and team effectiveness research (e.g., Mathieu et al., 2008), we propose a model of team burnout emergence and its effects on team members' burnout and team effectiveness. To make the proposed model actionable, it is articulated by different propositions characterizing the mechanisms through which team burnout operates. Overall, this theoretical effort is timely and needed because teams are the way in which work is currently done in organizations (Tannenbaum et al., 2012) and because our model formulates how team burnout emerges by extending current JD-R theory from a multilevel standpoint. Accordingly, our model has several contributions for theory, research, and practice that are worth to be highlighted.

### Implications for Theory and Research

Firstly, incorporating the team level in the JD-R theory (Bakker & Demerouti, 2017) is crucial because team contexts present new relevant variables and new dynamics affecting burnout that were not enough accounted for in extant theoretical developments. Since teams embody a social context, the fact that burnout cues will become salient will make them more likely to be elaborated and shared by team members. This explains that team burnout could emerge, even if just one team member's perceived demands are higher than perceived resources. Thus, acknowledging that team members shall cope simultaneously with individual and team sources of job demands (and resources) to effectively fulfil team goals is clearly an advancement in the study of burnout in organizations. In this regard, our model clarifies how team structural variables contribute to team members' burnout via increasing their demands



over and above the resources provided and, subsequently, how team burnout emerges. Once emerged, team burnout further impacts members' burnout occurrence both directly, via team social norms and self-categorization, and indirectly through moderating the team structural-members' demands/resources imbalance-members' burnout relationship. Additionally, team burnout through team regulation alterations impairs team transition and action processes. As far as we know, this is the first theoretical effort clarifying how team burnout emerges and its effects on team members' burnout and team effectiveness.

Secondly, our model proposes that team burnout emerges in a compilation rather than a compositional way (Cronin et al., 2011; González-Romá, 2011; Kozłowski & Klein, 2000). This approach assumes that not all team members will be contributing to team burnout in the same degree and/or at the same time. Thus, the focus should be on individual team members' participation in the emergence and maintenance of team burnout state, and its measurement needs to account for the variance of contribution among team members (Kozłowski & Klein, 2000). This fact allows to identify how each team member contributes to the total team burnout level, in the same way that individuals add to the number of accidents or to the level of absenteeism in a team. Once emerged, it could be expected different patterns of emergence, for example, a pattern in which the majority agree on a certain magnitude of team burnout, together with a minority who disagree with that view.

Thirdly, by analyzing the role of key team structural variables and the moderating role of team burnout on the relationship of these structural variables and individual burnout occurrence, our model contributes to uncovering the need for further clarification regarding what are team-level demands and resources. This is particularly relevant, as the inherent nature of socially construed phenomena suggests that the same variable could operate either as a demand or as a resource, based on team prevalent climate. In the same vein, our model contributes to clarifying if a compatible perception of being a member of a burned-out team will always negatively affect the assessment of team structural conditions as demands, therefore causing negative and/or counterproductive work behavior via team members' burnout (Mercado et al., 2018). In this regard, extant research reported how team supportive climates create conditions for team members to display counterproductive work behaviors (Gino et al., 2009; Pearsall & Ellis, 2011). Hence, other team structural variables such as team task complexity, team procedural rigidity, or external leadership (Dietz et al., 2017; Rico et al., 2008; Rico et al., 2019) could be studied to clarify under what circumstances these variables play a demand or resource role. To further stimulate the analysis of team demands and resources and their interactions, these analyses could also be extended to consider different industries in determining to what extent the surrounding organizational culture and environment may facilitate team burnout (Geerts et al., 2021).

Fourthly, the incorporation of the team level explains why once team burnout has emerged team effectiveness will suffer, particularly through energy depletion and motivational losses (Chen et al., 2009) via two co-regulatory mechanisms (i.e., team compensatory control and control reduction). This situation will negatively impact both transition and action processes, compromising the whole team capacity to reach high quality goals (Naumann & Bennet, 2002), ultimately impairing team effectiveness (LePine et al., 2008). The effect of team burnout can be so harmful that could even endanger team existence as a psycho-social entity through negative and/or counterproductive job behavior and the loss of team purpose (Driskell et al., 1999; West, 2012). Considering all the effects derived from team burnout, this state could act as a reminder that teams shall be also protected from the negative effects that excessive job demands may produce on their process and effectiveness.

Finally, the multilevel nature of this model requires multilevel analysis techniques (e.g., random coefficient modelling) to advance

in testing the proposed relationships within and across levels (Arora, 2010). Also, as the consideration of time is critical to understanding team burnout emergence, longitudinal approaches are also required to reveal the relationships between the variables outlined in the proposed model over time. Combining both multilevel analyses with a longitudinal perspective will help in clarifying the causal chain linking team structural variables, team burnout, co-regulatory mechanisms, as well as team effectiveness and feedback loops among them. Further, longitudinal studies could also reveal the antecedent role that some team processes (e.g., conflict management) might play according with the performance phase the team is transiting (Marks et al., 2001).

## Implications for Practice

Despite our manuscript emphasizes theory development, the team burnout model has a clear applied purpose in contributing to healthier and more effective team-based organizations. In this regard, practitioners and managers should keep in mind that team burnout can emerge both when individual work arrangements are adapted to team-based ones, and also when such team-based organizational structures have been implemented for a while. In the first case, managers could prevent team burnout emergence by conducting a thorough work analysis to decide what responsibilities will be placed on teams and clarify under what structural constraints teams will work (Geerts et al., 2021; West et al., 2016). The consideration of team design is then essential, specifically the interplay between team members' individual and team demands, their resources, and the assessment of how job enrichment could add extra teamwork demands. Thus, highly demanding working conditions shall be matched with the necessary resources to deal with them, and team members shall be supported in anticipating possible stressors and how to collectively address them (Rigby et al., 2016).

In the second case, when team-based structures have been implemented for a while, managers and teams need to periodically assess alterations in team demands and resources, in particular, assessing the potential incongruences between individual and team goals (DeShon et al., 2004; Fu et al., 2021), such as those associated with seemingly initially punctual demands that turned into permanent, causing further team workload imbalance and or asymmetrical interdependencies.

In addition, managers and teams may benefit from using after-event reviews (e.g., DeRue et al., 2012) to early identify behavioral burnout markers (e.g., complaints on workload imbalance, reduced helping behaviors, or not to accept assignments) that will evidence whether team burnout is emerging or has already been installed in the team (Sano & Picard, 2013). Relatedly, other assessment activities concern how organizations anticipate the extent to which new trends in their industries will impose additional and new demands on their teams. In this regard, organizations shall support teams to manage new working conditions (e.g., industry 4.0, human-robot teams) and helping them identify and/or develop new resources to cope with their current demands via training and development at the team level and team reflexivity (Fu et al., 2021). Accordingly, our model is also applicable when organizational strategic changes occur (e.g., merging or downsizing), which will likely place new demands on teams through modifying their working conditions and procedures (Staufenbiel & Köning, 2010; Zenger, 2002).

## Limitations and Future Developments

The novelty, complexity, and dimensionality of this model imply certain limitations that deserve to be discussed. Although the relationships between the most relevant variables are included in the



proposed model, we believe that team level variables could be further extended in subsequent empirical and theoretical efforts (Bakker & Demerouti, 2017; Duffy et al., 2006), for example, accounting for the potential interactions among the three team structural variables proposed, or incorporating team processes (e.g., goals specification, coordination).

While the developed propositions aim to guide empirical efforts, some of them are grounded on scarce empirical evidence. For that reason, they should be considered with caution until further research evidence become available (e.g., Propositions 7 to 9). Additionally, the team burnout dimensionality shall be subject of further empirical clarification ensuring an ample agreement in the definition of the construct.

As the proposed model identifies the concepts and underlying mechanisms of team burnout emergence, additional efforts would be needed to uncover how the included variables could change over time. A way forward in this regard will be the use of computational modelling to assess the adequacy of the formulated propositions in a virtual experimentation of simulated teams (Grand et al., 2016) in combination with a more traditional laboratory setting (Lei, 2018). This will represent a step forward in the study of burnout in organizations.

## Conclusion

Because we work in teams more than ever, we should prevent the negative effects that teamwork additional job demands (e.g., work intensity, social demands) place on teams and their members. Clarifying how team burnout emerge, the role of team structural variables on its emergence and its effects on individual burnout and team effectiveness is key to prevent team burnout and its correction as soon as it begins to emerge. We hope the propositions formulated herein stimulate further research on team burnout and help teams, their members, and their hosting organizations improve their effectiveness and wellbeing.

## Conflict of Interest

The authors of this article declare no conflict of interest.

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