



The role of social network characteristics in employee burnout, exhaustion and disengagement: A PLS-SEM study

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ABSTRACT

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Burnout is a significant problem in the workplace that involves emotional exhaustion and disengagement and can negatively affect employee health and performance. In this study, we explored the phenomenon of “burnout contagion” within organizational teams and how two variables, PTS and SNA, mediate the influence of employee burnout. A quantitative, descriptive, and explanatory correlational research design was used, and data were collected from 385 employees of seven FMCG organizations in Kathmandu Valley. Both results indicate that PTS and SNA are important contributors to employee burnout and that there is a strong correlation between emotional exhaustion and work disengagement. The mediation analysis also confirmed that burnout played a mediating role between PTS, SNA, and these two negative employee outcomes. The study found interpersonal relationships to be an important factor in the spread of burnout in organizational social networks and that people at the network hubs were more vulnerable to burnout. The results show that burnout is more than just a psychological phenomenon of the individual; it is also a social phenomenon affected by team interaction and configuration of the team network. This study ends with some practical recommendations, especially regarding the need for continuous monitoring of network centrality, fostering positive employee relations, and network-based interventions to prevent the spread of burnout and enhance organizational well-being and sustainability.

Contribution/Originality: This study contributes to the existing literature by linking social network position to burnout contagion in a non-Western context. This is one of the few studies to examine perceived team size and social network centrality together as predictors of burnout.

1. INTRODUCTION

Burnout is considered an extensive occupational stressor, which shows up in the form of emotional exhaustion, disengagement (or depersonalization), and a feeling of diminished personal accomplishment (Ayu, Faradisha, Gustav, Rha, & Sari, 2025; Maslach & Leiter, 2016). It results in a range of negative impacts on people's mental and physical health, as well as on their motivation and job satisfaction, and on organizations through their decreased productivity, increased staff resignations, and lower team performance (Bakker & Demerouti, 2007; Li, Wang, & Wu, 2025;

Meredith et al., 2020). The implications for practice are significant: resources are still being invested in individual-level interventions on a large scale, including reallocating workload and offering wellness programs; however, burnout is still a significant problem, and a purely individual-level approach might not be enough. Given that burnout is likely to be influenced by employee roles and relations within their team networks, there is a need for more than symptom-catching for the diagnosis of employees who are likely to be burning out or are likely to be the vectors for burnout within their teams. This information could be used to better inform targeted interventions, such as reconfiguring team communication or offering extra support to those who are very central instead of using the same organization-wide strategy. Individual-level determinants, such as high workload, unclear role, and lack of job resources, have mainly been the focus of burnout research (Bianchi, Manzano-García, & Rolland, 2021). Nonetheless, there is a growing acknowledgment that burnout is not only a solitary person's experience but may also be affected by the dynamics of social and relational interactions.

Recent research has found that a phenomenon called burnout contagion has occurred, which is the transfer of burnout from one teammate to another. The theory of emotional contagion, which suggests that people around you can influence your emotions through their verbal or nonverbal communication, has been utilized to explain this phenomenon (Hatfield, Cacioppo, & Rapson, 1993). Empirical evidence further indicates that, as team members' burnout levels influence one another, they become increasingly similar in their states of being over time. Moreover, this alignment process remains strong even after controlling for objective work stressors. The latter observation points to collaborators and social networks as the main facilitators of burnout (Bakker & Demerouti, 2007; Li et al., 2025; Meredith et al., 2020). Specifically, the alignment of burnout symptoms among coworkers has been revealed by numerous studies in education and healthcare settings, as those with frequent, intense, emotional, or multiplex interactions are more prone to burnout.

Despite this growing body of evidence, the literature on burnout contagion suffers from four specific and consequential gaps that limit both theoretical understanding and practical applications. Burnout contagion has been the subject of research, and various insights have been drawn; however, several limitations still exist in the field. First, most studies are based on aggregate team-level measures or perceived coworker burnout rather than structurally modeled social network data. As a result, the specific pathways through which an employee's broader network position gives rise to more concrete network behaviors, such as how central they are and how frequently they interact with others, remain largely unexplored, and their relative contribution to burnout has rarely been quantified (McLinton, Jamieson, Tuckey, Dollard, & Owen, 2023). Second, studies have mostly centered on Western, high-income settings and industries such as education and healthcare, meaning it remains unclear whether contagion dynamics generalize to other organizational and cultural contexts (Suboh et al., 2025). Third, many researchers adopt cross-sectional designs, which hinders the understanding of the temporal dynamics of burnout spread and how network structures shape contagion over time (Hopp et al., 2022). Fourth, the distinct dimensions of burnout, namely exhaustion, disengagement, and reduced efficacy, are often collapsed into a single-dimensional concept, obscuring the possibility that these dimensions are driven by network factors to different degrees and may therefore require different intervention strategies. Taken together, these gaps indicate that while burnout contagion is well-established as a phenomenon, the specific structural pathways and their differential effects on distinct burnout dimensions remain empirically underspecified.

To address these gaps, this study makes several novel contributions to the literature on burnout. First, rather than relying on aggregated or purely perceptual measures of coworker burnout, this study applies Partial Least Squares Structural Equation Modeling (PLS-SEM) to directly model how employees' perceived team size and their broader social network analysis (SNA) profile predict burnout, and how this SNA profile shapes their network centrality and interaction frequency. Second, rather than treating burnout only as a pass-through mediator, this study separately establishes burnout's direct effect on exhaustion and disengagement before examining whether burnout also mediates the relationship between team size, SNA, and these two outcomes, offering a more granular, mechanism-

focused account of contagion than prior single-dimensional approaches. Third, by simultaneously testing direct, indirect, and total effects, this study clarifies whether SNA and team size influence employee outcomes primarily through burnout or through additional direct pathways, a distinction largely unaddressed in prior contagion research. In doing so, this study extends emotional contagion theory into a quantitative, network-analytic framework, providing an empirically grounded account of how and through which structural channels burnout travels and mediates outcomes within teams, rather than simply establishing that it does.

Accordingly, this study addresses the following research questions:

RQ1: To what extent do perceived team size (PTS) and social network centrality (SNA) predict employee burnout in organizational teams?

RQ2: How is employees' social network centrality (SNA) reflected in their interaction frequency and network centrality?

RQ3: To what extent does employee burnout affect exhaustion and disengagement?

RQ4: Does burnout mediate the relationship between (a) perceived team size and (b) social network centrality and employees' exhaustion and disengagement?

Guided by these questions, the current research adopts a social network perspective to study the spread of burnout in a team-based environment. This study examines employees' network interactions, evaluates exhaustion and disengagement at the individual level, and investigates the roles of network features, such as social network analysis, network centrality, and interaction frequency, in the propagation of burnout. The main objective of this study is to investigate how burnout spreads within organizational teams by examining the role of social network factors in influencing employee exhaustion and disengagement (EG).

This paper is organized as follows: In Section 2, the theoretical underpinnings of emotional contagion and burnout contagion are summarized, and the study's hypotheses on social network factors, burnout, and the dimensions of burnout are presented. The research design, sample, instruments, and PLS-SEM analysis methods are discussed in Section 3. The results are presented in Section 4, which contains the measurement model assessment (reliability, validity, and multicollinearity) and the results of the structural model. The discussion is presented in Section 5, and the conclusion in Section 6, along with the study's limitations and recommendations for future research.

2. LITERATURE REVIEW

2.1. Overview of Burnout

Burnout is an occupational disorder that occurs when one is chronically exposed to work-related stress. It is characterized by emotional exhaustion, disengagement (or cynicism), and the feeling of having reduced personal accomplishment (Maslach, Schaufeli, & Leiter, 2001). Emotional exhaustion denotes the total depletion of emotional and physical resources, disengagement is the manifestation of negative attitudes or distancing from work, and reduced efficacy is the feeling of being incompetent and not having done anything good (Demerouti, 2024). Historically, research on burnout has been directed mainly towards individual causes and factors such as excessive workload, role ambiguity, lack of autonomy, and insufficient social support (Bakker & Demerouti, 2007; Bianchi et al., 2021). These factors lead to lower motivation, job dissatisfaction, and poorer health outcomes, among others. However, over time, it has been realized that burnout is not solely an individual phenomenon but is also affected by social and relational contexts within the team.

2.2. Burnout and Organizational Outcomes

Burnout drastically affects employees and organizations. The strongest associations with burnout are disengagement, tiredness, absenteeism, intention to leave, and poor job performance (Scanlan & Still, 2019). Moreover, burnout reduces team performance as members with low energy or who are not involved might stop participating in joint work, which will consequently lower the amount of coordination and productivity (Appel-

Meulenbroek, van der Voordt, Aussems, Arentze, & Le Blanc, 2020). However, the strength of these associations is not uniform in the literature. While some meta-analytic evidence confirms burnout as a robust predictor of withdrawal and disengagement, other large-scale meta-analyses have questioned whether burnout and disengagement/engagement are fully distinct constructs, given the high dimension-level correlations observed between them and the risk of construct overlap in self-report measures (Cole, Walter, Bedeian, & O'Boyle, 2012). This unresolved measurement debate is one reason why the present study models exhaustion and disengagement as separate, empirically distinguishable outcomes rather than assuming their relationship to burnout is uniform. The adverse effect of burnout on an organization's performance emphasizes the need to recognize the individual and social factors that aid its occurrence.

2.3. Social Perspectives: Emotional Contagion and Crossover Models

Burnout can spread from one colleague to another via personal relationships, a phenomenon that has been called burnout contagion. One of the main ideas behind emotional contagion theory is that people can affect each other's feelings through both verbal and nonverbal communication, leading to the same emotional states in the group (Hatfield et al., 1993; Sy & Choi, 2013). The crossover model also clarifies that one person's stress or burnout can impact others in the team through direct communication or understanding responses (Bakker & Demerouti, 2007). This crossover pattern has been empirically demonstrated at the team level: in a large multilevel study of 2,229 police officers across 85 teams, team-level burnout and engagement were both found to predict individual members' burnout and engagement, even after controlling for individual job demands and resources (Bakker, van Emmerik, & Euwema, 2006) lending strong support to the claim that burnout transmission operates above and beyond individual-level stressors. All these theories indicate that the social positions and interaction styles of employees might affect not only the probability but also the magnitude of burnout in teams.

2.4. Social Network Analysis (SNA) and Well-Being at Work

Social network analysis offers a methodical approach to researching how the interplay among workers leads to results such as burnout. The features of the network, such as centrality, tie strength, interaction frequency, and density, can influence the level of stress and emotional contagion to which the worker is exposed (Kärner, Shkoza, & Pohlmeier, 2024; Sierksma & Ghosh, 2010). However, the findings on the direction of this relationship are inconsistent. Some studies frame high centrality as a risk factor because well-connected employees are exposed to a greater volume of coworkers' emotional states and are therefore more susceptible to absorbing negative affect (Kärner et al., 2024). Others frame centrality as potentially protective, on the logic that well-connected employees also have greater access to social support and informational resources, which may buffer against burnout rather than amplifying it (Sierksma & Ghosh, 2010). This divergence suggests that the effect of centrality on burnout may not be uniformly positive or negative, but may instead depend on the emotional valence of what is flowing through the network—support versus strain, a distinction that the existing literature rarely tests directly. A related network-based study using symptom network analysis among healthcare workers exposed to workplace violence similarly found that exhaustion, rather than centrality itself, emerged as the most central and influential symptom bridging burnout to other adverse outcomes (Xu et al., 2025), reinforcing that the network position of specific burnout symptoms, not only that of individual employees, warrants closer attention.

2.5. Empirical Evidence for Burnout Contagion

The social transmission of burnout is supported by empirical studies. For instance, studies conducted with healthcare workers and teachers reveal that the burnout levels of coworkers are positively correlated, even when the effects of workload and objective stressors are controlled. Studies based on networks show that people who have more frequent or multiplex interactions experience a higher convergence of exhaustion and disengagement; thus, social

ties are identified as the factor that propagates burnout (Rogala et al., 2016). This pattern is not confined to the healthcare and education sectors. A recent quantitative study of the digital workplace found that information overload and fear of missing out, both arguably proxies for excessive interaction demands, significantly predicted employee exhaustion using a JD-R framework (Marsh, Perez Vallejos, & Spence, 2024), suggesting that interaction-driven strain generalizes beyond the sectors traditionally studied. Nevertheless, findings across settings are not always convergent: whereas team-based crossover studies in policing and healthcare report strong coworker alignment in burnout (Bakker et al., 2006), studies in more individualized or remote/digital work contexts report comparatively weaker or more indirect contagion effects, since reduced face-to-face interaction may limit the emotional-contagion pathway, even where workload-driven exhaustion remains high (Marsh et al., 2024). This contrast implies that burnout contagion may be conditional on the interactional density of the work context rather than being a uniform phenomenon. Nevertheless, most prior studies are based on self-reported perceptions of coworker burnout instead of actual network data, which limits the accuracy of identifying contagion mechanisms (Shapiro, Zhang, & Warm, 2015). Furthermore, most research has been conducted in Western contexts or in the education and healthcare sectors; thus, the findings are not very generalizable.

2.6. Research Gaps

Although there is proof of burnout contagion, gaps remain. Taken together, the studies reviewed above reveal a field that has firmly established that burnout spreads between coworkers but has not resolved how or under what conditions it does so. The number of studies that directly map social networks and examine how interaction patterns, centrality, and tie strength play a role in the spread of burnout is very limited. Most research uses cross-sectional designs, which restrict the comprehension of time-related dynamics. Furthermore, the concept of multidimensional burnout, which involves both exhaustion and disengagement, is still ignored. Additionally, as noted above, existing findings on the role of network centrality are contradictory, as it is variously described as a risk factor and a protective resource. This inconsistency has rarely been addressed empirically within a single study design. This study aims to fill these gaps by studying seven organizations in the Kathmandu Valley, employing a social network methodology to explore the contributions of PTS and SNA to burnout, which subsequently leads to disengagement and exhaustion.

2.7. Theoretical Foundations

This study is based on several intertwined theoretical approaches to the spread of burnout within an organizational team, applying the concepts of Social Network Theory (SNT), emotional contagion, Job Demands-Resources (JD-R), and Conservation of Resources (COR) theories.

Social Network Theory (SNT) is a structural framework that leads to the interpretation of interpersonal relationships within teams and the impact of interpersonal relations on the spread of psychological conditions. SNT suggests that the patterns, positions, and strengths of social ties affect the information, norms, and behaviors flowing between people (Liu, Sidhu, Beacom, & Valente, 2017). Network characteristics such as centrality, tie strength, and network density provide exposure of an actor to the states of other actors, with central members being in positions where they have the most contacts with a larger number of peers. These structural traits in organizational contexts predispose some employees to the effects of the emotional moods of their colleagues, thus helping to propagate the symptoms of burnout to other groups in the network.

Although it can explain the structural influence, SNT cannot describe the psychological mechanisms that cause and spread burnout. Therefore, it is complemented by Emotional Contagion Theory, which explains how emotional states are spread among people both directly and indirectly through social interaction (Hatfield et al., 1993). Emotional contagion holds that people automatically imitate and coordinate the faces, affect, and behavior of the person(s) they see. When applied to work teams, repetitions, particularly repetitions with stress, frustration, or disengagement, may cause employees to absorb the emotional conditions of their colleagues, which is part of the

contagion of burnout symptoms at the group level. This allows closing the structural implication of SNT to real shared emotional experiences, which come up in the form of exhaustion or disengagement.

In an attempt to further contextualize burnout in terms of stressors at work, the Job Demands-Resources (JD-R) Model is used. According to the JD-R model, burnout is caused by a lack of balance between job demands and job resources, wherein too many job demands (i.e., perceived team stress) drain the physical and emotional resources of individuals, resulting in exhaustion and disengagement (Bakker & Demerouti, 2007). In this scheme, demands and resources are distributed under the impact of social interactions and networking positions. For example, employees with high centrality can find themselves subjected to a higher frequency of task interaction and emotional exchanges, which puts more pressure on the demands and speeds up resource depletion.

Finally, the Conservation of Resources (COR) Theory provides a broader perspective on motivation in the context of stress and burnout, as it posits that individuals strive to acquire, maintain, and defend their valued resources. When these resources are endangered or lost, burnout results (Hobfoll, 1989; Holmgreen, Tirone, Gerhart, & Hobfoll, 2017). In a networked setting, the loss of resources may not be discrete; when one person has a high degree of exhaustion or detachment, other networked peers can view it as a loss of social, emotional, or task resources (e.g., support, energy, positive affect). This loss ripple effect adds to the strain between related members, which helps support burnout propagation.

Collectively, these frameworks offer a more complete understanding, as SNT determines who is better connected and possibly more powerful in the network; emotional contagion describes how moods are passed; JD-R explains why greater demands and fewer resources lead to burnout; and COR theory describes the motivational implications of losing resources within interpersonal relationships. Combining the structural and psychological approaches, the current study hypothesizes that burnout contagion works both via the embeddedness of employees in social connections and through the process of emotional and resource flow within the connections.

2.8. Hypotheses Development

The proposed concept is based on Social Network Theory and the Job Demands-Resources (JD-R) model, according to which employees are influenced by team-related stress and network centrality on burnout dynamics. Disengagement and exhaustion, in turn, are affected by burnout. The hypotheses formulated below are developed based on previous empirical results and theoretical justification.

2.8.1. Perceived Team Size and Worker Burnout

Perceived team size (PTS) is the joint workload pressure, role conflict, and interpersonal strain in a team. Job demands deplete employees' psychological resources (Bakker & Demerouti, 2007), putting them at a greater risk of burnout according to the Job Demands-Resources (JD-R) model. This is further supported by emotional contagion theory (Hatfield et al., 1993), which postulates the transmission of stress among team members, thereby increasing the strain on individual members. Evidence shows that team-level stress is also a major contributor to individual burnout (Halbesleben, 2006; Westman, 2001). On this theoretical and empirical premise, the following hypothesis is proposed.

H₁: Perceived team size (PTS) has a positive effect on employee burnout.

2.8.2. Centrality on Social Networks and Burnout in Employees

Centrality in social networks measures how connected employees are within organizational networks. Social network theory suggests that information and emotions flowing through the network are more likely to reach people with high centrality (Liu et al., 2017). According to emotional contagion theory, relationships among employees indicate that highly connected employees are especially vulnerable to adopting negative feelings from other employees (Ekanayake & Weerasinghe, 2019). According to previous research, central employees experience greater

emotional strain because they are constantly exposed to stressed colleagues (Cummings & Cross, 2003; Kang & Jang, 2022). Hence, the following is expected.

H₂: Social network centrality (SNA) has a positive effect on employee burnout.

2.8.3. Burnout and Employee Outcomes

Burnout, which comprises emotional exhaustion and depersonalization, lowers employees' motivation and causes withdrawal behaviors (Maslach et al., 2001). Social exchange theory (Blau, 2017) suggests that depleted employees respond to the situation by disengaging themselves at work, whereas the JD-R theory underlines that exhaustion is caused by the constant depletion of resources (Demerouti, 2024). Empirical research has found that burnout enhances indifference and fatigue among staff members. Thus, the following hypotheses are proposed.

H_{3a}: Employee burnout positively affects disengagement.

H_{3b}: Employee burnout positively affects exhaustion.

2.8.4. Burnout as a Mediator

Figure 1 illustrates the conceptual framework of the study. Burnout can also moderate the correlations between perceived team stress and social network centrality and the consequences of disengagement and exhaustion. According to emotional contagion processes, stress and negative emotions within groups are taken into the organization in the form of burnout, which then reflects in disengagement and exhaustion (Halbesleben, 2006; Hatfield et al., 1993). The mediating role of burnout, which is the focus of social network research, is supported by employees in central positions who have frequent interactions (Li et al., 2021). Based on this, the following mediating hypotheses are proposed.

H_{4a}: Burnout mediates the relationship between PTS and disengagement.

H_{4b}: Burnout mediates the relationship between PTS and exhaustion.

H_{5a}: Burnout mediates the relationship between SNA and disengagement.

H_{5b}: Burnout mediates the relationship between SNA and exhaustion.

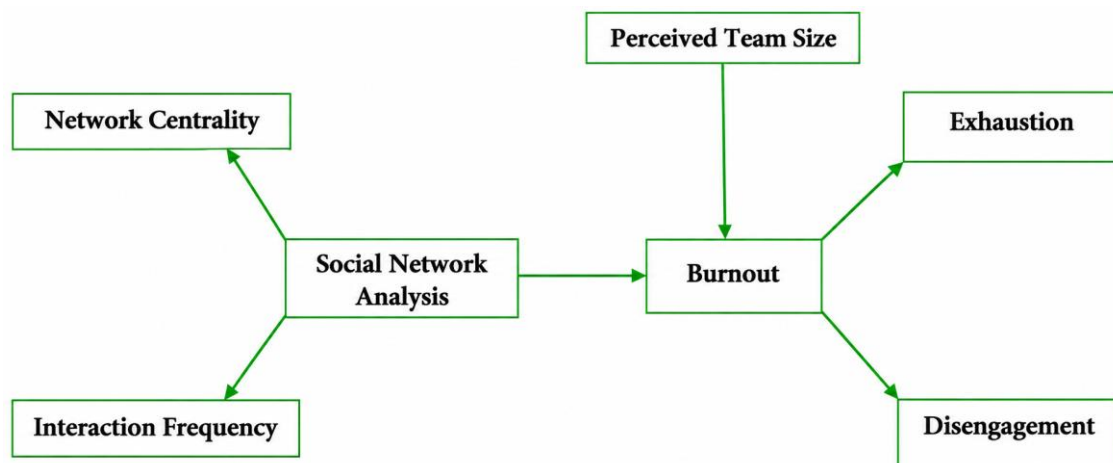


Figure 1. Conceptual Framework.

3. METHODS

3.1. Research Design and Approach

This research applied a cross-sectional time horizon and used quantitative methods as its main approach. A descriptive and explanatory correlational research design was employed to investigate the connections between perceived team stress, social network centrality, burnout, and its consequences in organizational teams. This type of

design made it possible to gather data at one specific time and opened up the way for analyzing patterns, relationships, and associations among the variables to be studied.

To test the proposed research framework, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using SmartPLS 4. The structural model was evaluated using a bootstrapping procedure with 5,000 bootstrap subsamples and bias-corrected and accelerated (BCa) confidence intervals (CIs). PLS-SEM was selected because it enables the simultaneous assessment of measurement and structural models, making it well-suited for examining multiple direct and indirect relationships among latent constructs. Compared with traditional regression techniques, PLS-SEM provides robust estimates for prediction-oriented research and complex mediation models without requiring strict assumptions of multivariate normality (Hair, Hult, Ringle, & Sarstedt, 2022).

3.2. Unit of Analysis

The unit of analysis used in this study is an individual employee, and he/she reports on perceptions of team stress, centrality in social networks, and burnout. Although team dynamics are a collective phenomenon, past studies suggest that individual perceptual indices are valid at the team level, especially when analyzing individual experiences and results (Klein & Kozlowski, 2000; Mathieu, Maynard, Rapp, & Gilson, 2008). Social network theory suggests that people occupy space in relational networks, which determines how they are exposed to information, resources, and emotional contagion (Borgatti & Halgin, 2011). The measures of network positions and perceived team stress at the individual level capture the processes by which burnout is caused by both relational and personal factors. This practice follows emotional contagion theory, which states that stress and burnout can be transmitted between people through interpersonal relations, with people being influenced by their relationships in various ways based on their centrality in the network (Hatfield et al., 1993; Westman, 2001). In this manner, the analysis of team-level effects through individual perceptions is theoretically justified because it is a way in which team stressors are converted into individual burnout and further disengagement or drainage. Future studies could use objective team-level data to supplement perceptual data and enhance multilevel validity.

3.3. Population and Sample

The research mainly revolved around employees in leading fast-moving consumer goods (FMCG) companies in Nepal, such as Chaudhary Group (CG), Unilever Nepal Limited, Dabur Nepal, Sharda Group, Vishal Group, Century Group, and Surya Nepal Private Limited. These seven organizations were purposively selected because they represent the largest and most established FMCG employers operating in the Kathmandu Valley, collectively accounting for a substantial share of formal-sector FMCG employment in the region, and because their team-based operational structures (e.g., distribution, sales, and production teams) made them suitable for examining team-level social network dynamics. As the total employee count of these organizations was not publicly available or centrally disclosed by the companies (a common constraint in Nepal's private sector, where firms do not routinely publish workforce statistics), the population size could not be determined precisely. Therefore, an unknown-population sampling approach was used. Given this constraint, the sample size was not derived from a known population sampling frame but was instead determined using standard guidelines for structural equation modeling. Following the widely applied rule of thumb for PLS-SEM, which recommends a minimum sample size of at least ten times the largest number of structural paths directed at any single construct in the model (Hair, Risher, Sarstedt, & Ringle, 2019) and cross-validated using G*Power 3.1 for a linear multiple regression model with the maximum number of predictors in the structural model (five predictors), a small-to-medium effect size ($f^2 = 0.15$), $\alpha = .05$, and statistical power of .95, the minimum required sample size was estimated at approximately 138 respondents. The achieved sample of 385 respondents therefore substantially exceeds this minimum threshold, providing strong statistical power to detect the hypothesized effects of the study. A total of 400 questionnaires were distributed to reduce potential non-response error, and 385 completed responses were analyzed, yielding a response rate of 96.25% (385/400). The high response rate is attributable to the

questionnaires being administered in person with the cooperation of each organization's HR department and the short, structured nature of the survey instrument.

3.4. Sampling Technique

A convenience sampling method was used because the study needed fast data gathering from employees in several different organizations, and there was no single sampling frame that would allow us to list everyone or randomly reach this spread-out population. Because of this constraint, recruiting participants based mostly on who was available and willing to answer ended up being the most practical way to get enough employees during the time and budget limits of the project. This choice is also in line with established practice in applied organizational research, where convenience sampling can be used to check relationships efficiently before putting more resources into heavier probability-based designs (Etikan, Musa, & Alkassim, 2016).

3.5. Data Collection Instrument

Data were obtained using a structured questionnaire that included a 5-point Likert scale with the following options: strongly disagree (1), disagree (2), undecided (3), agree (4), and strongly agree (5). The questionnaire comprised two parts: the first part collected demographic data, while the second part contained items measuring the study constructs, as detailed in Table 1, together with each construct's operational definition and source.

Table 1. Construct Operationalization and Measurement Items.

Construct	Operational Definition	Measurement Items / Codes	Source
Disengagement (DI)	A two-dimensional psychological state comprising exhaustion and disengagement, reflecting depleted energy and reduced psychological investment in work, respectively.	I feel motivated and excited about my work. (DI1)	Demerouti, Bakker, Vardakou, and Kantas (2003) - adapted and modified
		I feel emotionally connected to my work tasks. (DI2)	
		I feel engaged and care about the outcomes of my work. (DI3)	
		I put my full effort into my work. (DI5)	
		I feel connected and aligned with my team and its goals. (DI6)	
Exhaustion (EX)	The intensity of physical, emotional, and cognitive strain resulting from prolonged work demands.	I feel energized and refreshed after completing my work. (EX1)	Demerouti et al. (2003) - adapted and modified
		I feel physically capable and strong at the end of the workday. (EX2)	
		I feel ready and motivated for the next workday. (EX3)	
		I feel able to take on additional work without strain. (EX4)	
		I feel enthusiastic when I think about my job. (EX6)	
		I feel mentally/emotionally balanced throughout my workday. (EX7)	
Interaction Frequency (IF)	The regularity and density of an employee's communication and collaborative exchanges with team members.	I regularly interact with my team members. (IF2)	Borgatti and Halgin (2011) - adapted
		I collaborate frequently with colleagues on work tasks. (IF3)	
		I engage in informal discussions with my team members, such as coffee breaks or chats. (IF4)	
		I actively exchange ideas or feedback with my colleagues. (IF5)	
		My work encourages frequent communication with team members. (IF6)	

Construct	Operational Definition	Measurement Items / Codes	Source
Network Centrality (NC)	The extent to which an employee occupies a structurally influential, well-connected position within their team's social network.	I actively communicate with most members of my team. (NC1)	Borgatti and Halgin (2011) - adapted
		Team members often seek my advice or input. (NC2)	
		I am actively involved in team discussions and decision-making. (NC3)	
		I play a central role in coordinating team activities. (NC4)	
		Many team members approach me for support or guidance. (NC5)	
Perceived Team Stress (PTS)	An employee's subjective perception of stress arises from team structure, workload, and coordination demands.	My team is well-sized to handle our tasks efficiently. (PTS1)	Mathieu et al. (2008) - author-developed
		Communication within my team is smooth and manageable. (PTS5)	
Burnout (BI)	Burnout is operationalized as a two-dimensional psychological state comprising exhaustion and disengagement, reflecting an employee's depleted energy and reduced psychological investment in work.	I feel emotionally drained by my work. (BI1)	Demerouti et al. (2003) - adapted
		I feel worn out at the end of a typical workday. (BI2)	
		I feel less interested in my work than I used to. (BI3)	

Note: Social Network Analysis (SNA) is specified as a higher-order construct consisting of two lower-order dimensions: Interaction Frequency (IF) and Network Centrality (NC).

Table 2. Demographic Information.

Gender		Frequency			Percent	
Female		165			42.86%	
Male		220			57.14%	
Marital		Frequency			Percent	
Married		261			67.79%	
Single		124			32.21%	
Area		Frequency			Percent	
Bhaktapur		74			19.22%	
Lalitpur		153			39.74%	
Kathmandu		158			41.04%	
Education		Frequency			Percent	
Primary level		33			8.57%	
SLC/SEE		87			22.60%	
Intermediate/+2		88			22.86%	
Bachelor level		112			29.09%	
Masters and above		65			16.88%	
Income		Frequency			Percent	
Up to Rs.20k		40			10.39%	
Rs.20,001 - Rs.40,000		154			40.00%	
Rs.40,001 - Rs.60,000		111			28.83%	
Rs.60,001 - Rs.80,000		75			19.48%	
+ Rs.80,000		5			1.30%	
Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Deviation	
Age	385	18.00	63.00	34.62	8.249	

As presented in Table 2, the demographic profile of the 385 respondents shows slightly more men (57.14%) than women (42.86%); thus, gender representation remains balanced in the surveyed organizations. The predominant marital status among the respondents was married (67.79%), and 32.21% were single. The respondents were scattered in the Kathmandu Valley among the three main regions, with Kathmandu having the largest share (41.04%), followed by Lalitpur (39.74%) and Bhaktapur (19.22%), implying that there was good coverage of major urban areas. Most of the respondents said they had completed a bachelor's degree (29.09%), followed by intermediate/+2 (22.86%),

SLC/SEE (22.60%), and master's and above (16.88%), while a small number had only primary-level education (8.57%). Regarding monthly income, 40.00% of the respondents earned between Rs. 20,001 and 40,000, 28.83% earned Rs. 40,001 to 60,000, 19.48% earned Rs. 60,001 to 80,000, 10.39% earned up to Rs. 20,000, and only 1.30% earned more than Rs. 80,000. The respondents covered a wide age range from 18 to 63 years, with a mean age of 34.62 years ($SD = 8.25$), comprising a diverse workforce of early-career and senior employees. Overall, the sample included employees of major FMCG organizations in the Kathmandu Valley with respect to gender, marital status, location, education, income, and age.

4. RESULTS

This section reports findings on the transmission of burnout in organizational teams, focusing on the impact of social network factors on employees' burnout experiences and loss of engagement, as described in Section 3, using inferential tools.

Table 3. Common Method Bias using Harman's Single-Factor Test.

Statistic	Value
Extraction Method	Principal Axis Factoring
First Factor Eigenvalue	11.466
Variance Explained by First Factor	39.854%
Common Method Bias	Not Detected (< 50%)

4.1. Common Method Bias

As presented in Table 3, common method bias was assessed using Harman's single-factor test (principal axis factoring). The first factor explained 39.854% of the total variance, which was below the recommended 50% threshold, indicating that common method bias was not a significant concern in this study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

4.2. Measurement Model Assessment

As specified in the Methodology (Section 3.4), Social Network Centrality (SNA) was modeled as a second-order reflective construct comprising Interaction Frequency (IF) and Network Centrality (NC). The measurement model is therefore assessed at the first-order level below, with SNA's dimension loadings reported separately in Table 4.

Table 4. Indicator Loadings, Collinearity, Internal Consistency Reliability and Convergent Validity.

Code	Loading	VIF	α	rho_a	rho_c	AVE
DI1	0.679	1.252	0.663	0.679	0.788	0.529
DI2	0.763	1.374				
DI3	0.608	1.167				
DI5	0.651	1.224				
DI6	0.553	1.142				
EX1	0.770	1.785	0.832	0.841	0.878	0.547
EX2	0.778	1.782				
EX3	0.777	1.772				
EX4	0.569	1.246				
EX6	0.771	1.678				
EX7	0.751	1.618	0.756	0.770	0.837	0.510
IF2	0.555	1.168				
IF3	0.720	1.416				
IF4	0.760	1.508				
IF5	0.726	1.443				
IF6	0.788	1.610				

Code	Loading	VIF	α	rho_a	rho_c	AVE
NC1	0.545	1.093	0.658	0.662	0.738	0.562
NC2	0.558	1.105				
NC3	0.655	1.164				
NC4	0.628	1.143				
NC5	0.614	1.115				
PTS1	0.878	1.187	0.569	0.592	0.820	0.696
PTS5	0.788	1.187				
BI1	0.527	1.803	0.878	0.890	0.901	0.639
BI2	0.772	1.682				
BI3	0.761	1.832				

4.2.1. First-Order Indicator Loadings, Collinearity, Internal Consistency Reliability and Convergent Validity

All indicators loaded most strongly on their intended constructs, with the majority of loadings exceeding 0.60. BI1 (0.527) and IF2 (0.555) were the lowest but were retained, given the adequate construct-level composite reliability and AVE. All VIF values (1.093–1.832) fell well below the conservative threshold of 3.0, indicating that multicollinearity was not a concern. Composite reliability (rho_c) exceeded 0.70, and the AVE exceeded 0.50 for every construct, supporting convergent validity. The PTS's Cronbach's alpha (0.569) fell below the conventional 0.70 threshold, an expected property of its two-item measurement; its composite reliability (0.820) met the criterion prioritized in PLS-SEM.

4.2.2. Second-Order Construct: Social Network Centrality (SNA)

As presented in Table 5, SNA was conceptualized as a reflective-reflective second-order construct, with IF and NC as first-order factors. Consistent with the disjoint two-stage approach, latent variable scores for IF and NC were used as indicators of SNA in Stage 2. The dimension loadings were high and significant, supporting SNA as a coherent higher-order construct.

Table 5. SNA Second-Order Dimension Loadings.

Dimension	Loading (β)	t	p
Interaction Frequency (IF)	0.933	121.000	0.000
Network Centrality (NC)	0.822	40.240	0.000

Table 6. Discriminant Validity.

Heterotrait-Monotrait Ratio (HTMT)						
	BI	DI	EX	IF	NC	PTS
BI						
DI	0.756					
EX	0.884	0.918				
IF	0.925	0.868	0.837			
NC	0.880	0.728	0.782	0.900		
PTS	0.888	0.807	0.780	0.815	0.897	
Fornell-Larcker Criterion						
	BI	DI	EX	IF	NC	PTS
BI	0.662					
DI	0.873	0.655				
EX	0.934	0.693	0.740			
IF	0.760	0.618	0.750	0.714		
NC	0.765	0.631	0.670	0.590	0.602	
PTS	0.781	0.739	0.699	0.620	0.571	0.834

4.3. Construct Distinctiveness Analysis

As presented in Table 6, HTMT values were within an acceptable range, with only two of the nine values exceeding the liberal threshold of 0.90: BI ↔ IF (0.925) and EX ↔ DI (0.918), where there was limited discriminant validity between Burnout and Interaction Frequency, and Exhaustion and Disengagement. The overlap of EX–DI is theoretically defensible because both are viewed as related aspects of 1 burnout syndrome (Maslach & Jackson, 1981) and the overlap of BI–IF is less theoretically predicted and is considered a limitation of the measurement.

Table 7. R², Adjusted R², and Q².

Constructs	R-square	R-square adjusted	Q ²
BI	0.813	0.812	0.216
DI	0.763	0.762	0.228
EX	0.873	0.872	0.324

4.4. Structural Model Assessment

4.4.1. Coefficient of Determination (R²) and Predictive Relevance (Q²)

As presented in Table 7, all three endogenous constructs exceeded the 0.50 threshold for substantial explanatory power, with R² for exhaustion reaching 0.873. The Q² values were all positive and fell within the medium range (0.15–0.35), confirming the model's predictive relevance for burnout.

4.4.2. Disengagement and Exhaustion

Table 8. Effect Size (f²).

Path	f-square
PTS → Burnout	0.516
SNA → Burnout	1.447
Burnout → Disengagement	0.544
Burnout → Exhaustion	0.220

As presented in Table 8, using Cohen (1988) benchmarks (0.02 = small, 0.15 = medium, 0.35 = large), PTS → Burnout, SNA → Burnout, and Burnout → Disengagement all produced large effect sizes, while Burnout → Exhaustion produced a medium effect size.

Table 9. Model Fit Indices.

Index	Saturated Model	Estimated Model
SRMR	0.082	0.084
d_ULS	1.607	2.526
d_G	0.384	0.481
Chi-square (χ ²)	896.896	918.241
NFI	0.866	0.823

4.4.3. Model Fit

As presented in Table 9, the model fit indices indicated an acceptable overall fit. The estimated model achieved an SRMR value of 0.084, within the acceptable threshold (< 0.10). The NFI value of 0.823 suggests an acceptable level of model fit for the data. These results indicate that the proposed model fits the observed data adequately.

4.5. Hypothesis Testing

Path significance was assessed using bootstrapping (5,000 subsamples). Direct-effect hypotheses (H1–H3b) were tested using structural path coefficients, and mediation hypotheses (H4a–H5b) were tested using specific indirect

effects. In H2, H4b, and H5b, SNA refers to the second-order composite score (formed by IF and NC in Stage 1), not a directly measured single construct. As in the prior version, no direct path from PTS or SNA to Disengagement/Exhaustion is specified in the model, so burnout's mediating role is full mediation by model design.

4.5.1. Direct Effects

Table 10. Structural Path Results - Direct Effects.

Hyp.	Path	β	t	p	Decision
H1	PTS $\rightarrow$ Burnout	0.346	10.064	< 0.001	Supported
H2	SNA $\rightarrow$ Burnout	0.627	19.417	< 0.001	Supported
H3a	Burnout $\rightarrow$ Disengagement	0.873	62.826	< 0.001	Supported
H3b	Burnout $\rightarrow$ Exhaustion	0.934	121.971	< 0.001	Supported

As presented in Table 10, all four direct-effect hypotheses were supported ($p < 0.001$). PTS and SNA both had significant positive effects on Burnout, with SNA being the stronger predictor ($\beta = 0.627$ vs. $\beta = 0.346$), supporting H1 and H2. Burnout, in turn, had large positive effects on Disengagement ($\beta = 0.873$) and Exhaustion ($\beta = 0.934$), supporting H3a and H3b.

Table 11. Specific Indirect Effects - Mediation via Burnout.

Hyp.	Path	β	t	p	Decision
H4a	PTS $\rightarrow$ Burnout $\rightarrow$ Disengagement	0.302	9.927	< 0.001	Supported
H4b	PTS $\rightarrow$ Burnout $\rightarrow$ Exhaustion	0.323	10.142	< 0.001	Supported
H5a	SNA $\rightarrow$ Burnout $\rightarrow$ Disengagement	0.547	18.348	< 0.001	Supported
H5b	SNA $\rightarrow$ Burnout $\rightarrow$ Exhaustion	0.585	18.622	< 0.001	Supported

4.5.2. Mediation Effects

As presented in Table 11, burnout fully mediated the effects of both PTS and SNA on disengagement and exhaustion (all $p < 0.001$), supporting H4a, H4b, H5a, and H5b. In summary, all eight hypotheses were supported: team-level stress perceptions and social network centrality are both significant antecedents of employee burnout, and burnout functions as a robust, fully mediating mechanism linking these antecedents to disengagement and exhaustion.

5. DISCUSSIONS

This study aimed to examine the spread of burnout in organizational teams by focusing on the role of social network factors in determining employee exhaustion and disengagement. Based on Social Network Theory, Emotional Contagion Theory, the Job Demands-Resources Model, and Conservation of Resources Theory, this study evaluated a set of hypotheses regarding the links between perceived team stress (PTS) and social network centrality (SNA), burnout, and its effects. The results lend considerable credibility to the suggested theoretical framework and simultaneously provide significant insights into the nature of burnout contagion in Nepalese organizational settings.

5.1. Role of Perceived Team Stress in Employee Burnout

The results indicated that the effect of perceived team stress (PTS) on employee burnout was significant and positive ($\beta = 0.346$, $t = 10.064$, $p < 0.001$), thus supporting Hypothesis 1. This finding is in tandem with the Job Demands-Resources (JD-R) model, which states that too many job demands drain employees of their psychological resources, resulting in burnout (Bakker & Demerouti, 2007). Role conflicts, workload pressures, and interpersonal strain, when shared by team members, drive these stressors throughout the team environment and influence individuals' psychological states. This finding implies that perceptions of stress at the team level contribute meaningfully to individual burnout, even after considering network position and interaction patterns.

Moreover, the significant indirect effects of PTS on disengagement ($\beta = 0.302$, $p < 0.001$) and exhaustion ($\beta = 0.323$, $p < 0.001$) via burnout confirm the mediation hypothesized in H4a and H4b, respectively. This pattern of mediation suggests that team-level stress is not directly linked to withdrawal behavior and fatigue but instead converts into burnout first before shaping these negative outcomes. This observation is consistent with emotional contagion theory (Hatfield et al., 1993), which suggests that stress and negative emotions among groups are transferred to individual members through interpersonal relationships, later developing into burnout symptoms.

5.2. Influence of Social Network Centrality on Burnout

Hypothesis 2 was supported, with centrality in social networks having a significant positive relationship with employee burnout ($\beta = 0.627$, $t = 19.417$, $p < 0.001$). This is one of the most significant findings of this study; it provides the first hard-data indication that people who are at the core of team networks are significantly more likely to experience burnout. This discovery adds to social network theory, which suggests that people with a larger number of connections are exposed to more information, feelings, and influences in the network (Borgatti & Halgin, 2011). In the burnout contagion model, the central members of an organization serve as nodes that can transmit and receive stress and negative affect from numerous collaborations, making them particularly susceptible to picking up the emotions of their numerous relationships in the network.

As hypothesized in H5a and H5b, the mechanism of the indirect effects of SNA on disengagement and exhaustion through burnout was clarified. These results indicate that network centrality affects employee outcomes primarily through its influence on burnout, which, in turn, drives disengagement and fatigue. This is consistent with prior research on emotional strain among centrally positioned workers (Cummings & Cross, 2003; Li et al., 2021), which identifies the mediating mechanism through which network position is converted into negative psychological consequences.

Notably, the effect sizes of SNA were consistently larger than those of PTS across the outcome variables. This suggests that an employee's position within social networks may be a more important factor in burnout than team-level stress perceptions. Theoretically, this result highlights the role of structural-relational variables in explaining occupational well-being, extending beyond classical stressor-oriented models of occupational health.

5.3. Burnout as a Determinant of Disengagement and Exhaustion

The findings provide strong support for H3a and H3b, showing that burnout is a strong predictor of both disengagement ($\beta = 0.873$, $t = 62.826$, $p < 0.001$) and exhaustion ($\beta = 0.934$, $t = 121.971$, $p < 0.001$). Such high coefficients are theoretically expected because disengagement and exhaustion are treated as central elements of the burnout construct (Maslach et al., 2001). Nevertheless, the effects of this size should be interpreted with caution. The close relationship between burnout and both disengagement ($r = 0.873$) and exhaustion ($r = 0.934$) raises real concerns about discriminant validity among these constructs, a concern independently confirmed via the Fornell-Larcker criterion in the Results section and discussed further in the Limitations section.

From a conservation of resources perspective (Hobfoll, 1989), these findings suggest that protective withdrawal (disengagement) and resource loss (exhaustion) are natural consequences of employee burnout. These relationships support the framing of burnout as a central mediating mechanism that converts workplace stressors and relational patterns into concrete employee responses. The PLS-SEM structural model illustrating these relationships is presented in Figure 2.

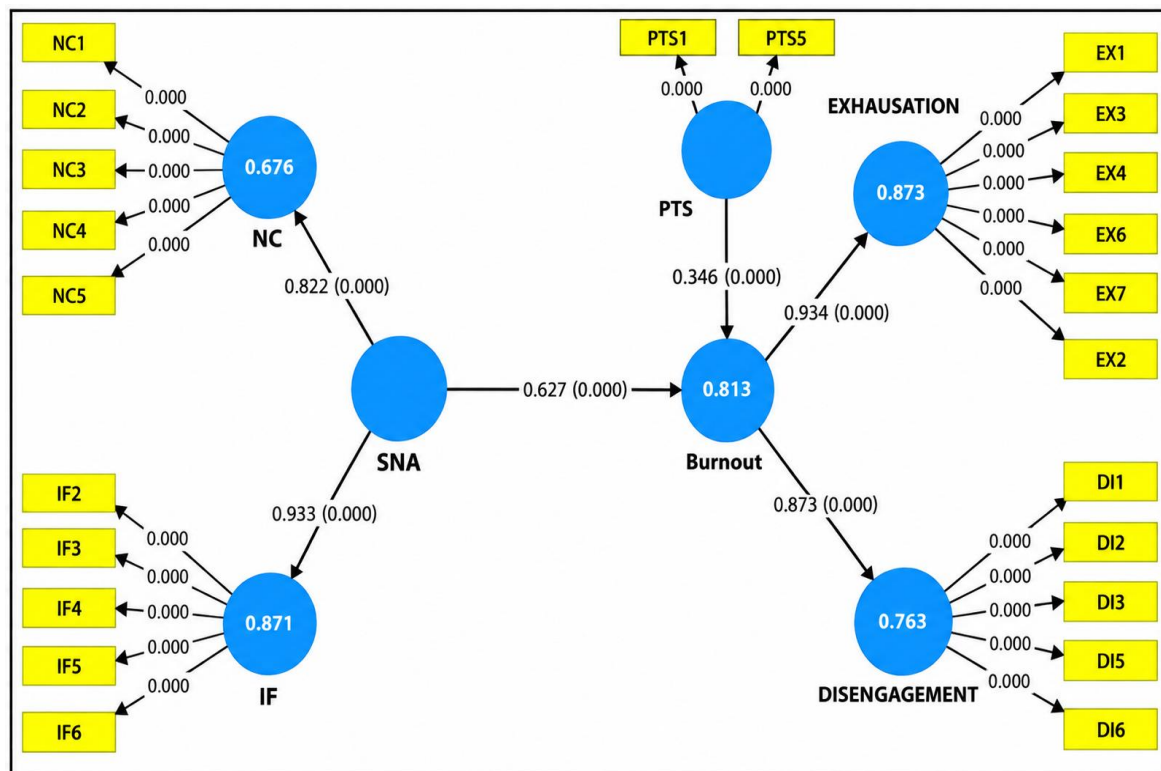


Figure 2. PLS-SEM Structural Model.

Note: P-values displayed as 0.000 in the SmartPLS-generated output represent values smaller than the software's displayed precision and are reported as $p < 0.001$ in the manuscript.

5.4. Theoretical Contribution

Network Centrality as a Vulnerability Factor: The fact that network centrality is a strong predictor of burnout ($\beta = 0.627, p < 0.001$) identifies it as a significant vulnerability factor in burnout contagion. Although previous studies have established that burnout is transmitted among colleagues, the most vulnerable individuals have not been clearly identified. The present research shows that centrally placed staff communication hubs, advisors, and coordinators are more exposed to the emotional conditions of the rest of the team and are therefore at increased risk of burnout. This study refines emotional contagion theory by demonstrating that the effect of contagion is structurally patterned, with centrality amplifying vulnerability. The larger effect of SNA relative to PTS ($\beta = 0.627$ vs. 0.346) questions the disproportionate attention given to individual-level stressors and suggests that structural-relational variables may play a more significant role in burnout.

Application of Network Theory to Occupational Health Frameworks: This study integrates social network theory with occupational health frameworks (JD-R, COR) by demonstrating that PTS and SNA are independent predictors of burnout, operating through different mechanisms. Job demands (perceived team stress) act through shared perceptions of workload and strain, whereas network position (centrality) acts through differential exposure to emotional contagion. This helps bridge an important gap, as past research has tended to examine individual stressors and social factors separately, and not in combination. The mediation results also indicate that burnout is the shared mechanism through which both pathways generate disengagement and exhaustion, connecting the two frameworks around resource depletion.

Cultural Extension of Burnout Research: This study extends burnout contagion research to a non-Western, South Asian setting by examining fast-moving consumer goods (FMCG) employees in Nepal. The observation that the same burnout contagion phenomena found in Western contexts are also present in Nepali corporate settings (SNA $\beta = 0.627$) suggests that the social transmission of burnout is not context-specific but is generalizable across settings. The underlying mechanisms of emotional contagion and resource depletion appear similar, regardless of cultural differences in communication style or organizational hierarchy. However, the scale of effects may reflect

cultural specifics. In a collectivist culture such as Nepal's, network centrality may carry particular emotional weight, underscoring the value of developing cross-cultural theory in this area.

Differential Prediction of Burnout Dimensions: The finding that exhaustion is a stronger predictor than disengagement ($\beta = 0.934$ vs. 0.873) contributes to understanding the multidimensionality of burnout. This is consistent with the conservation of resources theory, in which resource depletion is theorized to be a more immediate outcome of burnout than psychological withdrawal, which follows. Nonetheless, the fact that these constructs are highly correlated ($HTMT = 0.900$) raises the possibility that exhaustion and disengagement are not fully discrete dimensions but rather facets of a shared syndrome, which places researchers in the position of needing to refine conceptualization and measurement strategies in the future.

5.5. Managerial Implications

Support Centrally Positioned Employees: Advisors, group coordinators, and communication hubs are the most likely to experience burnout ($\beta = 0.627$), and organizations should focus their resources on these employees. Emotional boundary training for central employees can help them stay empathetic without becoming drained. Recovery time should also be scheduled during off-hours, and quiet spaces and peer networks should be encouraged to provide peers with coping strategies and support. **Implement Network-Based Burnout Monitoring:** The relationship between network centrality and burnout is stronger than the conventional individual-based measure of perceived team stress ($\beta = 0.627$ vs. 0.346), and important relational risk factors are overlooked when using the conventional individual-based measure.

In addition to individual surveys, companies should regularly perform social network mapping to identify employees who begin to demonstrate centrality, which indicates increased vulnerability. Aggregated communication data (with suitable privacy protection) can be useful for detecting groups of negative emotions that suggest the presence of contagion. Changes in network position can be used as early warning indicators. For example, when an individual becomes the only connector between different groups, they may require assistance to avoid burnout. **Adopt Team-Level Stress Management:** Perceived team stress is an indicator of burnout ($\beta = 0.346$); therefore, group-level approaches to perceived stress should be implemented by the team. Organizations need to develop a joint workload planning process to spread the workload over network roles and not into a few central positions. Mindfulness practices and team problem-solving can be used to create team resilience, which shares coping resources with the entire team.

A clear discussion of workload distribution ensures a better match between perception and reality, as well as stress amplification that is not based on actual demands. **Develop Contagion Management Skills for Leaders:** Contagion Management Skills are needed for leaders, since the relationships between PTS/SNA and disengagement/exhaustion are mediated by burnout (indirect effects: $\beta = 0.302$ – 0.585). Leaders should be trained to recognize early signs, such as clusters of negative effects, coordinated withdrawal, or spreading patterns of exhaustion, and should help facilitate constructive conversations about stress rather than over-talking about stress. Leaders must also demonstrate sustainable engagement and show their teams a protective approach to emotional involvement.

Change Organizational Structures: Network factors are significant in the causation of burnout, and organizations may wish to make structural changes to decrease the risk of contagion. This can involve structuring more than just scheduling time for interactions, for instance, by introducing liaison positions to take up the interaction load and replacing open-door policies with scheduled consultation hours to provide structural buffers. Reconfiguring physical and virtual environments to provide a balance of collaborative and quiet work areas can also provide employees with greater control over their interaction requirements.

6. CONCLUSION

This research illustrates that burnout is not merely an individual matter but a socially disseminated phenomenon in organizational teams. The findings show that perceived team stress (PTS) and social network centrality (SNA) are key antecedents of employee burnout, with their combined effects propagating through disengagement and exhaustion. The results support the view that burnout is a central mechanism that mediates the effects of team stress and relational dynamics on employee outcomes. Employees with high social network centrality are more susceptible to burnout, and this risk is compounded in a stressed team environment. Overall, this study underscores the need to examine not only interpersonal ties but also social network positions to understand how burnout spreads, offering new insights into how team structure and interaction patterns relate to employees' emotional and behavioral outcomes.

6.1. Limitations

Cross-sectional design: Cross-sectional data restrict the use of causal inference and cannot capture the temporal dynamics of burnout's contagion. A longitudinal or multi-wave design would be a stronger approach for future research seeking to understand how burnout forms and transmits across time within teams.

Undifferentiated types of interactions: Network centrality and perceived team stress were assessed without distinguishing between different types of social interactions (e.g., supportive versus task-oriented, emotional versus instrumental). Future research should examine the finer-grained features of interactions to identify which relational patterns most amplify or buffer burnout contagion.

Situational and cultural generalizability: Burnout contagion may operate differently across cultural, organizational, and occupational settings. Because most prior research has been conducted in Western, industry-based contexts, future studies should test this model in diverse settings and examine moderating factors, such as organizational culture, work role, and individual resilience.

Measurement overlaps among burnout, disengagement, and exhaustion: The exceptionally strong relationships observed between burnout and its hypothesized outcomes ($\beta = 0.873$ for disengagement; $\beta = 0.934$ for exhaustion) were accompanied by discriminant validity concerns, confirmed through both the heterotrait–monotrait ratio and the Fornell–Larcker criterion. This suggests that burnout, disengagement, and exhaustion may not be as empirically distinct as the measurement model assumes, consistent with theoretical accounts that treat exhaustion as the core component of burnout (Maslach & Jackson, 1981). Future research should consider refining the conceptual boundaries between these constructs, potentially through a second-order burnout formulation, and should extend the Perceived Team Stress scale measured here with only two items to strengthen its internal consistency reliability.

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Informed Consent Statement: Informed verbal consent was obtained from all participants prior to data collection. All collected data were anonymized to protect participants' confidentiality.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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REFERENCES

- Appel-Meulenbroek, R., van der Voordt, T., Aussems, R., Arentze, T., & Le Blanc, P. (2020). Impact of activity-based workplaces on burnout and engagement dimensions. *Journal of Corporate Real Estate*, 22(4), 279-296. <https://doi.org/10.1108/JCRE-09-2019-0041>

- Ayu, P. K., Faradisha, J., Gustav, J. S., Rha, W. Y., & Sari, R. K. (2025). Analysis of occupational psychological factors related to burnout among textile workers in a textile manufacturing company in Semarang. *International Journal of Health Science*, 5(3), 261–274. <https://doi.org/10.55606/ijhs.v5i3.6147>
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., van Emmerik, H., & Euwema, M. C. (2006). Crossover of burnout and engagement in work teams. *Work and Occupations*, 33(4), 464–489. <https://doi.org/10.1177/0730888406291310>
- Bianchi, R., Manzano-García, G., & Rolland, J.-P. (2021). Is burnout primarily linked to work-situated factors? A relative weight analytic study. *Frontiers in Psychology*, 11, 623912. <https://doi.org/10.3389/fpsyg.2020.623912>
- Blau, P. M. (2017). *Exchange and power in social life* (2nd ed.). London, UK: Routledge.
- Borgatti, S. P., & Halgin, D. S. (2011). On network theory. *Organization Science*, 22(5), 1168–1181. <https://doi.org/10.1287/orsc.1100.0641>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Cole, M. S., Walter, F., Bedeian, A. G., & O'Boyle, E. H. (2012). Job burnout and employee engagement: A meta-analytic examination of construct proliferation. *Journal of Management*, 38(5), 1550–1581. <https://doi.org/10.1177/0149206311415252>
- Cummings, J. N., & Cross, R. (2003). Structural properties of work groups and their consequences for performance. *Social Networks*, 25(3), 197–210. [https://doi.org/10.1016/S0378-8733\(02\)00049-7](https://doi.org/10.1016/S0378-8733(02)00049-7)
- Demerouti, E. (2024). Burnout: A comprehensive review. *Zeitschrift für Arbeitswissenschaft*, 78(4), 492–504. <https://doi.org/10.1007/s41449-024-00452-3>
- Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment*, 19(1), 12–23. <https://doi.org/10.1027//1015-5759.19.1.12>
- Ekanayake, E. M. H. L., & Weerasinghe, T. D. (2019). Impact of emotional contagion on work performance of employees. *Kelaniya Journal of Human Resource Management*, 14(2), 28–45. <https://doi.org/10.4038/kjhrm.v14i2.68>
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F. J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Thousand Oaks, CA, United States: SAGE Publications.
- Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, 91(5), 1134–1145. <https://doi.org/10.1037/0021-9010.91.5.1134>
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science*, 2(3), 96–100. <https://doi.org/10.1111/1467-8721.ep10770953>
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Holmgreen, L., Tirone, V., Gerhart, J., & Hobfoll, S. E. (2017). Conservation of resources theory: Resource caravans and passageways in health contexts. In C. L. Cooper & J. C. Quick (Eds.), *The handbook of stress and health: A guide to research and practice* (pp. 443–457). Chichester, England: Wiley-Blackwell.
- Hopp, M. D. S., Händel, M., Bedenlier, S., Glaeser-Zikuda, M., Kammerl, R., Kopp, B., & Ziegler, A. (2022). The structure of social networks and its link to higher education students' socio-emotional loneliness during COVID-19. *Frontiers in Psychology*, 12, 733867. <https://doi.org/10.3389/fpsyg.2021.733867>
- Kang, J., & Jang, J. (2022). Frontline employees' emotional labor toward their co-workers: The mediating role of team member exchange. *International Journal of Hospitality Management*, 102, 103130. <https://doi.org/10.1016/j.ijhm.2021.103130>

- Kärner, T., Shkoza, L., & Pohlmeier, W. (2024). A network model of stress contagion: Evidence from the vocational classroom. *Empirical Research in Vocational Education and Training*, 16(1), 12. <https://doi.org/10.1186/s40461-024-00166-0>
- Klein, K. J., & Kozlowski, S. W. J. (2000). From micro to meso: Critical steps in conceptualizing and conducting multilevel research. *Organizational Research Methods*, 3(3), 211-236. <https://doi.org/10.1177/109442810033001>
- Li, N., Huang, Q., Ge, X., He, M., Cui, S., Huang, P., . . . Fung, S.-F. (2021). A review of the research progress of social network structure. *Complexity*, 2021(1), 6692210. <https://doi.org/10.1155/2021/6692210>
- Li, R., Wang, S., & Wu, T. (2025). When I receive too much social support: The effect of social support overload on users' life burnout and discontinuance in fitness apps. *Healthcare*, 13(2), 191. <https://doi.org/10.3390/healthcare13020191>
- Liu, W., Sidhu, A., Beacom, A. M., & Valente, T. W. (2017). Social network theory. In P. Rössler, C. A. Hoffner, & L. van Zoonen (Eds.), *The international encyclopedia of media effects* (pp. 1-12). Hoboken, NJ: John Wiley & Sons.
- Marsh, E., Perez Vallejos, E., & Spence, A. (2024). Overloaded by information or worried about missing out on it: A quantitative study of stress, burnout, and mental health implications in the digital workplace. *SAGE Open*, 14(3), 21582440241268830. <https://doi.org/10.1177/21582440241268830>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99-113. <https://doi.org/10.1002/job.4030020205>
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103-111. <https://doi.org/10.1002/wps.20311>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34(3), 410-476. <https://doi.org/10.1177/0149206308316061>
- McLinton, S. S., Jamieson, S. D., Tuckey, M. R., Dollard, M. F., & Owen, M. S. (2023). Evidence for a negative loss spiral between co-worker social support and burnout: Can psychosocial safety climate break the cycle? *Healthcare*, 11(24), 3168. <https://doi.org/10.3390/healthcare11243168>
- Meredith, C., Schaufeli, W., Struyve, C., Vandecandelaere, M., Gielen, S., & Kyndt, E. (2020). 'Burnout contagion' among teachers: A social network approach. *Journal of Occupational and Organizational Psychology*, 93(2), 328-352. <https://doi.org/10.1111/joop.12296>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Rogala, A., Shoji, K., Luszczynska, A., Kuna, A., Yeager, C., Benight, C. C., & Cieslak, R. (2016). From exhaustion to disengagement via self-efficacy change: Findings from two longitudinal studies among human services workers. *Frontiers in Psychology*, 6, 2032. <https://doi.org/10.3389/fpsyg.2015.02032>
- Scanlan, J. N., & Still, M. (2019). Relationships between burnout, turnover intention, job satisfaction, job demands and job resources for mental health personnel in an Australian mental health service. *BMC Health Services Research*, 19(1), 62. <https://doi.org/10.1186/s12913-018-3841-z>
- Shapiro, J., Zhang, B., & Warm, E. J. (2015). Residency as a social network: Burnout, loneliness, and social network centrality. *Journal of Graduate Medical Education*, 7(4), 617-623. <https://doi.org/10.4300/JGME-D-15-00038.1>
- Sierksma, G., & Ghosh, D. (2010). Network theory. In *Networks in action: Text and computer exercises in network optimization* (pp. 3-10). Boston, MA: Springer.
- Suboh, M. W., Atatre, M. H., Dababseh, B. H., Ghnimat, A. S., AbuHamdiya, L. W., & Alhaddad, M. S. (2025). Motivations, satisfaction, and career aspirations of undergraduate medical students in West Bank, Palestine: A cross-sectional study. *BMC Medical Education*, 25(1), 1637. <https://doi.org/10.1186/s12909-025-08230-3>

- Sy, T., & Choi, J. N. (2013). Contagious leaders and followers: Exploring multi-stage mood contagion in a leader activation and member propagation (LAMP) model. *Organizational Behavior and Human Decision Processes*, 122(2), 127-140. <https://doi.org/10.1016/j.obhdp.2013.06.003>
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, 54(6), 717-751. <https://doi.org/10.1177/0018726701546002>
- Xu, H., Li, Z., Wang, X., Wu, M., Liu, T., & Wu, Q. (2025). Interrelationships of anxiety, burnout, depression, and insomnia among Chinese healthcare workers exposed to workplace violence: A network analysis. *Depression and Anxiety*, 2025(1), 9815503. <https://doi.org/10.1155/da/9815503>

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