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# Cross-level effect of resonant leadership on remote engagement: A moderated mediation analysis in the unprecedented COVID-19 crisis

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## ABSTRACT

Drawing on the theory of intentional change, the study investigated the cross-level indirect effect of resonant leadership on the remote engagement of software professionals through psychological empowerment. We explored how mindfulness buffers the associations between resonant leadership, psychological empowerment, and remote engagement in the context of the Coronavirus Disease 2019 (COVID-19). We used a sample of 406 team members nested in 56 teams from 15 large-scale Indian information technology firms during the second wave of the COVID-19 pandemic. Our empirical strategy is based on hierarchical linear modelling. The findings revealed that the cross-level effect of resonant leadership on work engagement through psychological empowerment is the strongest when subordinates show a lower degree of mindfulness. To the best of our knowledge, this is the first study to unravel the mechanisms underlying the relationship between resonant leadership, psychological empowerment, work engagement, and mindfulness by empirically validating cross-level mediation and moderation. Moreover, the findings add a new lens to the theory of intentional change through the cross-level effects of resonant leadership on the proposed criterion variables under the bounded conditions of low-intensity mindfulness of subordinates.

## 1. Introduction

India has witnessed an overcast economic outlook across sectors since March 21, 2020 because of the COVID-19 pandemic (Bhadury et al., 2021), with the information technology (IT) industry being no exception (Malik & Velan, 2020). As the first wave of the pandemic had nearly declined globally, by the end of January 2021, companies had witnessed a surge in employee engagement (Lewis, 2021). Businesses had barely witnessed a green shoot of recovery (John, 2021) when the pandemic's second wave hit them with unprecedented challenges. These challenges included unreliable internet and cellular networks, family illnesses, social restrictions, tight quarters at home, and other obstacles that weighed down IT employees (Pranamik & Sangani, 2021), thereby setting contextual differences from those of pre-pandemic research studies on telework (Sardeshmukh et al., 2012; Gajendran & Harrison, 2007). Remote work became a mandate during the pandemic (Bezerra et al., 2020; Donnelly & Proctor-Thomson, 2015; Russo et al., 2021; Smite et al., 2022) in India after the government's announcement on March 22, 2022. Although the vaccination drive shielded against the

harmful effects of COVID-19, employees continued to experience loneliness, poor communication, and collaboration (Russo et al., 2021), falling sick and staying quarantined, and leaving their companies (Toniolo-Barrios & Pitt, 2021). Because IT-related work is typically project- and team-driven, it becomes difficult to perform tasks in the absence of multiple team members. All these issues created layers of complexities and challenges that inadvertently impeded employee engagement in the IT sector during the second wave of the pandemic, resulting in a high attrition rate (Aggarwal, 2022; Suárez-Albanchez et al., 2021). High attrition has also been a challenge during normal times (Chaudhary & Rangnekar, 2017; Deshpande & Gupta, 2019; Mishra & Mahanty, 2019). Thus, further investigation is warranted because pre-pandemic studies have outlined several organisational benefits of work engagement (Choi et al., 2015; Halbesleben, 2010; Karanika-Murray et al., 2015; Kim et al., 2017; Robertson & Cooper, 2011; Schaufeli & Bakker, 2004; Strom et al., 2014; Xanthopoulou et al., 2007). Moreover, attracting talent and retaining engaged and committed employees in the IT sector is crucial (Bhatnagar, 2012; Tokdemir, 2022).

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### 1.1. Need and context of the study

First, remote engagement is influenced by the negative events within the team, such as the absence of team members due to a virus attack (Jayathilake et al., 2021), which puts tremendous pressure on the remaining team members. The multilevel effect of reduced engagement has been illustrated in different contexts in the pre-pandemic Western literature (Eldor & Harpaz, 2016; Tuckey et al., 2013). However, in the context of a pandemic, these studies do not highlight how unprecedented negative events positively or negatively affect team members' engagement in the Indian IT industry, where software professionals are nested within teams.

Second, seminal work in this area has widely deliberated on leadership as a key driver of work engagement (Bedarkar & Pandita, 2014; Decuyper & Schaufeli, 2020; Ghadi et al., 2013; Parr et al., 2021). However, these studies have highlighted the interpersonal view of leadership, with a few exceptions focusing on the within-person view (Breevaart et al., 2016). Furthermore, relational-oriented leadership has garnered a positive response when the organisational ecosystem is characterised by greater flexibility in work hours, workspaces, and work from home (Baane et al., 2011; Branicki, 2020). It was also the need of the hour during the pandemic situation (Carnevale & Hatak, 2020). Traces of resonant leadership, which have been deliberated from relational orientation (Marques, 2015) and the theory of intentional change (ICT) lens (Boyatzis et al., 2006), are found in Hinduism. It comprises the dimensions of hope, compassion, mindfulness, and altruistic feelings, which are well imbibed in the socialisation process (Fry, 2003; Kinkela et al., 2017) and are considered essential to bring necessary transformation in organisations at the time of crisis (Lenka & Tiwari, 2016). Such leadership dimensions are critical for navigating unprecedented situations (Gaan & Shin, 2022) without getting trapped in a cycle of dissonance and stress. Therefore, it is argued that resonant leadership is more relevant in the Indian context than other forms of leadership. Instead of direct supervision and interference by leadership (Kapucu & Ustun, 2018), software professionals in project-driven tasks prefer leadership support to overcome the challenges posed by crises and encourage engagement through collaboration, team member interactions, empathy, and constant communication (Chanana & Sanggeeta, 2021; Gaan & Shin, 2022; Lenka & Tiwari, 2016). Thus, it is asserted that leaders who focus on resonating the collective interest of the team with organisational interest will be the most suitable to handle crises. Furthermore, in collectivist societies such as India, leader-subordinate interactions may differ across teams (Vora et al., 2019), and resonant leadership is conceptualised using individual- and group-level variables (Druskat et al., 2003). Therefore, it has a cross-level effect on individual engagement (Chaudhary, 2014). However, existing literature has not addressed the cross-level effect of resonant leadership on subordinates' remote engagement (Bartsch et al., 2021; Gaan & Shin, 2022). Given this situation, further research is warranted to investigate the association between resonant leadership and remote engagement because of intra- and inter-individual fluctuations in work engagement and the differential treatment of resonant leaders towards their subordinates (Yammarino & Dansereau, 2008) in the context of unprecedented crises (Parr et al., 2021).

Third, previous studies have illustrated a proximal relationship between psychological empowerment and work engagement (Bhatnagar, 2012; Joo et al., 2016). The construct of work engagement is considered multidimensional, embracing dimensions such as behavioural-energetic (i.e., vigour), emotional (i.e., dedication), and cognitive (i.e., absorption) components (Schaufeli et al., 2006). This is also considered to have a multilevel effect (Chaudhary, 2014). However, studies have yet to investigate the multilevel effect of psychological empowerment on remote engagement in the Indian context (Blaique et al., 2022; Tuckey et al., 2013). Bhatnagar (2012) states that cross-level research in the IT industry must investigate the link between psychological empowerment and work engagement in any psychological process. One proximate

reason for the need to investigate this is that the construct is not level-free and is affected by macro-level entities such as teams, organisations, and leader-subordinate dyads (Kozlowski & Klein, 2000; Seibert et al., 2004; Vora et al., 2019).

Fourth, there are very few seminal studies on the cross-level associations between leadership and psychological empowerment (Sun et al., 2012; Xu & Yang, 2018). Previous studies have investigated resonant leadership as an antecedent to psychological empowerment (Bawafaa et al., 2015; Wagner et al., 2013). However, this relationship is limited in the context of crises wherein subordinates' psychological mechanisms are dependent on the leader to be strengthened, considering the pandemic challenges and complexities. Furthermore, the association between resonant leadership and psychological empowerment lacks a sound theoretical perspective. Furthermore, previous studies have revealed the relationship between resonant leadership and psychological empowerment from a Western perspective (Boyatzis et al., 2006; Marques, 2015). However, studies are yet to examine this association in a collectivistic society, in which the practice of leaders empowering team members at the dyadic level may not be egalitarian (Hofstede, 1991). The pandemic has created a physical distance between leaders and subordinates. Therefore, it is found that leaders exert effort to empower subordinates if the latter are not conscious of the situation and take a judgemental approach (Kroon et al., 2017). Although previous studies have already deliberated on the important contingency factors that determine the association between resonant leadership and the psychological empowerment of subordinates (Dust et al., 2014), they lack a comprehensive framework to define when and under what circumstances leaders should empower followers (Houghton & Yoho, 2005), considering that their mindfulness varies. Moreover, the boundary conditions that explain the association between resonant leadership and psychological empowerment are yet to be explored in a situation wherein employees typically face distractions while working remotely (Carnevale & Hatak, 2020) and lack self-awareness (mindfulness). Thus, resonant leadership, work engagement, and psychological empowerment are context-specific or generic in nature and remain unfolded to date (Alotaibi et al., 2020).

At present, there are no studies that weave together constructs such as resonant leadership, psychological empowerment, work engagement, and mindfulness of subordinates. Furthermore, there are a limited number of studies on mindfulness as a moderator that explain the mechanism of association between leadership and subordinates' outcomes (Hülshager et al., 2015; Kroon et al., 2017; Shapiro et al., 2007), particularly its cross-level effect, which may notably reorient direction (Sutcliffe et al., 2016).

Thus, this study makes several contributions in the context of COVID-19, wherein empowering subordinates is a challenge for leaders because of the constraints arising from unprecedented crises. First, it examines the cross-level effect of resonant leadership on psychological empowerment in the context of an organisation being challenged by resource constraints. Second, it investigates the relationship between psychological empowerment and remote engagement, which few studies have examined in the context of the unprecedented situation. Third, this is the first study to examine the integration of constructs such as leadership, work engagement, and psychological empowerment under a conditional mechanism of employee mindfulness that buffers the relationship among constructs. Fourth, the framework of the study is based on positive organisational psychology that is completely ingrained in the theory of intentional change. It states that resonant leadership is a profound driver and a motivating factor for employees to bring sustainable and intentional change so that subordinates can navigate the crisis easily and stay engaged.

## 2. Theoretical framework and hypothesis

### 2.1. Theory of intentional change (ICT)

As per the seminal work (Boyatzis, 1999, 2008; Goleman et al., 2002), intentional change is treated as a complex process of attaining a sustainable change in one's behaviour, feelings, and perceptions, depending on how one looks at life, event, or work. A person strives to attain an ideal self and personal vision through articulated learning plans and positive emotional attractors (Boyatzis, 2006). Such changes are interpreted while engaging in social interactions with the reference group. Therefore, sustained changes occur not only at the individual level but also at the group and organisational levels (Akrivou et al., 2006). Individuals show volitional responses to such sustained changes because of their self-awareness and mindfulness. Not only are they driven by strong will but also by their values and motivation. In this study, resonant leaders enabled their subordinates by empowering them psychologically to undergo intentional changes in a sustained manner so that they could handle challenges and complexities in the environment. This is more effective because an intentional change is fast and does not result in unintentional consequences. In addition, the leader endeavours to undergo continuous self-renewal to attain an ideal self and resonate with subordinates' expectations when they maintain relational interactions in the realm of social frameworks. Such self-renewal invokes a positive emotional attractor tipping point that generates hope and optimism among the subordinates to experience positive feelings that eventually ensure better engagement. Thus, the leader provides an emotional glue to bind the team members and bring about sustained changes at the team level (Boyatzis, 2009) through compassion and mindfulness. Thus, the ideal self of a leader becomes a driver for employee engagement during catastrophic and unprecedented changes (Boyatzis, 2006). It acts as a change agent to bring about a transition from the real self to the desired state to overcome challenges.

### 2.2. Resonant leadership, psychological empowerment, and remote engagement

Resonant leadership is fundamentally ingrained in emotional intelligence. It possesses the ability to balance emotions and inevitably build harmony among employees (Squires et al., 2010). A resonant leader has the ability to establish a compelling vision and empathic approach, develop and coach, and affiliate to encourage collaboration and teamwork (G. Cummings, 2004). This becomes a potential source of engagement for subordinates (Bawafaa et al., 2015; Wagner et al., 2013), particularly in team-based cultures (Ethiraj et al., 2005).

The common challenges faced by software professionals during the pandemic were psychological issues such as pandemic-related fears, distractions, and interruptions while working in non-dedicated workspaces. Teamwork-related concerns, such as lack of collaboration, socialisation, and awareness about what is going on, as well as greater difficulty in communicating with peers, expanding one's contact network, or conducting brainstorming and problem-solving sessions, were barriers to the seamless execution of tasks (Panda & Sahoo, 2021; Smite et al., 2022). In addition to these challenges, fast-changing technology, relentless pressure, tight deadlines, and endless working hours are typical characteristics of the Indian IT sector that add layers of complexities (Cummings, 2008). Such complexities and challenges can be addressed by a higher level of competence (Panda & Sahoo, 2021). Thus, the complexities stemming from technical, psychological, and social issues during pandemics could trap employees in the sacrifice syndrome, resulting in a high level of disengagement (Boyatzis, 2008). Therefore, we argue here that the complexity arising from the pandemic is leading to a tipping point wherein employees are becoming disengaged. Under such circumstances, it is asserted from the lens of ICT that a resonant leader could be a potential driver for purposeful engagement among employees while working remotely (Mani & Mishra, 2021). The

emotional response of the resonant leader provides the glue to overcome the sacrifice syndrome (Boyatzis & McKee, 2006) and stay committed. The self-renewal tendency of the resonant leader to attain the ideal self and bring sustainable change invokes positive emotional attractor tipping points for subordinates. This is because such an ideal-self attainment process does not occur in isolation when the leader and subordinates are nested in teams (Akrivou et al., 2006; Smith, 2006). Thus, ideal-self attainment infuses a positive effect among subordinates to stay inspired and committed (Boyatzis, 2009). This, in turn, can provide inspiration and energy to subordinates through the quality and quantity of pathways to adapt to new situations with a sense of hope and a compelling vision (Ashby et al., 1999; Aspinwall & Leaf, 2002). This inspires employees to remain engaged.

Therefore, from the above arguments, we hypothesise that.

**Hypothesis 1.** Resonant leadership will positively affect the remote engagement of software professionals.

Psychological empowerment, a multidimensional construct, is described as an intrinsic motivation (Conger & Kanungo, 1988; Thomas & Velthouse, 1990) for employees to embrace meaning, competence, self-determination, and impact (G. M. Spreitzer, 1995). The first dimension, 'meaning', refers to the feeling that employees have about their work and its importance. The second dimension, 'competence', shows the degree to which employees believe in their ability to perform a task. The third dimension, 'self-determination', describes autonomy in decision-making. The last dimension, 'impact', outlines the differences one experiences while performing the task. As knowledge-intensive work in the IT sector (Swart & Kinnie, 2003) requires more cognitive competence to handle complexities in tasks during pandemics, autonomy and psychological empowerment become pivotal in handling challenges (Spreitzer, 2008). Empowered employees enjoy a sense of autonomy, which positively affects their engagement in a task (Joo et al., 2016; Strauss & Parker, 2014).

Furthermore, leadership is a contextual determinant of psychological empowerment (Richardson et al., 2021) that provides hope, autonomy, and competence to handle complexities during a pandemic. Therefore, the association between leadership and psychological empowerment can be explained from the perspective of ICT because the unprecedented pandemic situation involves layers of complexities and challenges. Each subordinate who faces challenges and uncertainties during the pandemic needs a clear image of their desired future through hope and optimism (Boyatzis, 2006) that behaves as a psychological mechanism to cope with such uncertainties (Russo et al., 2021).

Resonant leaders can provide hope and optimism by building a subordinate's self-image. Furthermore, leader-subordinate interactions produce adaptive and emergent behaviour in a team, which may become a reference team to bring such sustainable changes in other teams (Akrivou et al., 2006; Smith, 2006). Thus, subordinates are inspired to develop their self-image as per their desired future. The transformation occurs in such a way that they value meaningfulness in the changed behaviour. Such learning orientations arouse positive feelings about one's competence to handle complexities and challenges independently, creating a significant impact on one's work with an accompanying sense of hope. Such an accompanying psychological mechanism with emerging ideal images produces deep passion and commitment to overcome challenges in a crisis. Thus, arousal from a positive effect diminishes anxiety, leading to purposeful engagement (Boyatzis et al., 2006; Haslam & Reicher, 2006).

Therefore, in the backdrop of the literature, we arrive at the following hypotheses:

**Hypothesis 2.** Resonant leadership positively affects psychological empowerment among software professionals.

**Hypothesis 3.** Psychological empowerment positively affects remote engagement among software professionals.

**Hypothesis 4.** Psychological empowerment mediates the relationship between resonant leadership and remote engagement among software professionals.

### 2.3. Mindfulness as a moderator

Mindfulness is considered a reflective judgement (Bhikkhu, 1998), wherein the individual pays attention to the present moment with a non-judgemental and accepting attitude (Brown & Ryan, 2003; Kabat-Zinn, 2015). It refers to a cognitive awareness that assists a person in staying attentive, immersive, and focused on the present action (Thich Nhat Hanh, 1976). Mindfulness may be related to the attentional deployment stage, which involves efforts to focus on a particular topic or task (Gross et al., 2004).

Software professionals faced numerous challenges during the COVID-19 pandemic. Among these challenges were continuous distractions and interruptions, which caused less focused time to work for endless hours (Russo et al., 2021). The causes of the interruptions were mainly endless meetings, lack of communication and collaborations (Russo et al., 2021), lack of workspace at home, internet interruptions, ergonomic distractions, and parental pressure as a result of suspended schools and colleges (Ford et al., 2021). This resulted in lower productivity (Russo et al., 2021) and a higher level of disengagement (Pattnaik & Jena, 2020). Therefore, it is argued from the lens of ICT that low mindfulness of subordinates will increase the dependency-seeking behaviour (Nübold et al., 2013) to feel psychologically empowered, less distracted (Kovjanic et al., 2012), and to stay engaged.

Thus, the resonant leader empowers employees psychologically (Goleman et al., 2002) through hope, compassion, and mindfulness (Boyatzis et al., 2006). This is particularly relevant during the COVID-19 pandemic, which has brought catastrophic changes in the form of low self-control (Lenka & Tiwari, 2016), surprise, and discontinuity (Boyatzis et al., 2006). All of these attract tipping points that can be changed only when the change agent, such as a leader, develops emergent behaviour among subordinates by invoking a positive emotional attractor. The emergent behaviour would, in turn, generate a sense of empowerment in employees about their work, which would make a meaningful difference in their lives (Hülshager et al., 2015) and inevitably increase their focus and emotional stability. Eventually, greater engagement is experienced while working remotely, with less feelings of surprise and anxiety arising from unprecedented challenges. In contrast, when subordinates experience a higher level of mindfulness, dependency-seeking on the leader is reduced. Under such circumstances, it is argued that the effect of resonant leadership on one's psychological empowerment would be less (Hülshager et al., 2015) because higher mindfulness creates decoupling of the self from experiencing emergent behaviour (Bishop et al., 2004; Glomb et al., 2018). Thus, staying engaged while working remotely will depend on subordinates' awareness and sense-making of the present moment. Based on ICT, it is assumed that the mindfulness of subordinates may facilitate transition or change smoothly or seamlessly if the driver, like psychological empowerment, gets boosted. This, in turn, makes the subordinates more receptive to the environment and allows them to easily handle challenges in work-related matters.

However, high self-awareness of the subordinates may interfere with the effect of the resonant leader's ideal image and personal vision on subordinates because of setting personal standards of performance, which may not be closer to the normative standards of the organisation (Beaubien & Payne, 1999). This may develop anxiety and confusion regarding sustained changes (Chen et al., 2000), thereby leading to disengagement. Moreover, the personal vision of the resonant leader resonates with an organisational objective and a complex system embedded in the social framework. Subsequently, when a subordinate's high mindfulness leads to an uninvolved bystander, the effect of a resonant leader would be less likely to invoke a positive effect on the subordinates to create a sense of psychological empowerment (Glomb

et al., 2018). Moreover, it is less likely to affect the subordinates' emergent behaviour and discovery because such intentional changes follow a top-down structure (Boyatzis, 2006). In turn, a reduced feeling of psychological empowerment leads to a decreased level of engagement. Therefore, this study hypothesises the following.

**Hypothesis 5.** Mindfulness moderates the direct positive relationship between resonant leadership and psychological empowerment such that this relationship is stronger for less mindful software professionals than for more mindful software professionals.

**Hypothesis 6.** Mindfulness moderates the indirect positive relationship between resonant leadership and remote engagement such that this relationship is stronger for less mindful software professionals than for more mindful employees.

The framework of this study is illustrated in Fig. 1.

## 3. Research methods

### 3.1. Sample and procedure

For the analysis, data were collected from IT companies located in Eastern India. The web-based survey was initially conducted by contacting select team members with whom the authors were acquainted. As the extant literature makes it evident that the functioning of the project team is at a particularly salient level for purposes of aggregation, this study takes this into consideration (Gaan & Shin, 2022). The team members belonged to mid-sized companies, with a workforce ranging from 200 to 1000. Using the support of team members, the team leaders (who constitute the mid-level of the organisation) were gradually approached to complete the web-based survey. Nearly 75 teams were approached using the snowball technique, and only 68 provided a completely filled response, fulfilling the dyadic relationship of leader-subordinate.

All participants provided informed consent and were guaranteed confidentiality of their information. A total of 360 team members, nested in 68 teams, were sampled. Of these, roughly 5–6 team members in each team responded. The data were collected in two phases with a time lag of 1 month. In phase 1 (June 2021), team members and leaders responded to questionnaires on resonant leadership and remote engagement, respectively. In phase 2, team members measured mindfulness and psychological empowerment.

The duration of the professional relationship shared between the leaders and subordinates was two years and three months, respectively. Male software professionals constituted 45% of the total responses from team members, whereas the remaining were female software professionals. In contrast, female software project leaders constituted 38% of the answers, whereas the remaining were male software and project leaders. The average age of the team members was 24.7 [standard deviation (SD) = 1.68] years and that of the team leaders was 34.02 (SD = 2.01) years.

### 3.2. Measures

#### 3.2.1. Resonant leadership

Resonant leadership was measured ( $\alpha = 0.78$ ) using a 10-item scale developed previously (Cummings et al., 2010; ZORAN SPASIC Prescott Valley et al., 2016), which examines the following four dimensions of resonant leadership styles: self-awareness, social awareness, self-management, and relationship management. Sample items such as 'My team leader focuses on success and potential rather than failures' and 'My team leader actively mentors and coaches individuals and teams' were rated by the subordinates on a 5-point scale.

#### 3.2.2. Psychological empowerment

Individual psychological empowerment ( $\alpha = 0.86$ ) was assessed

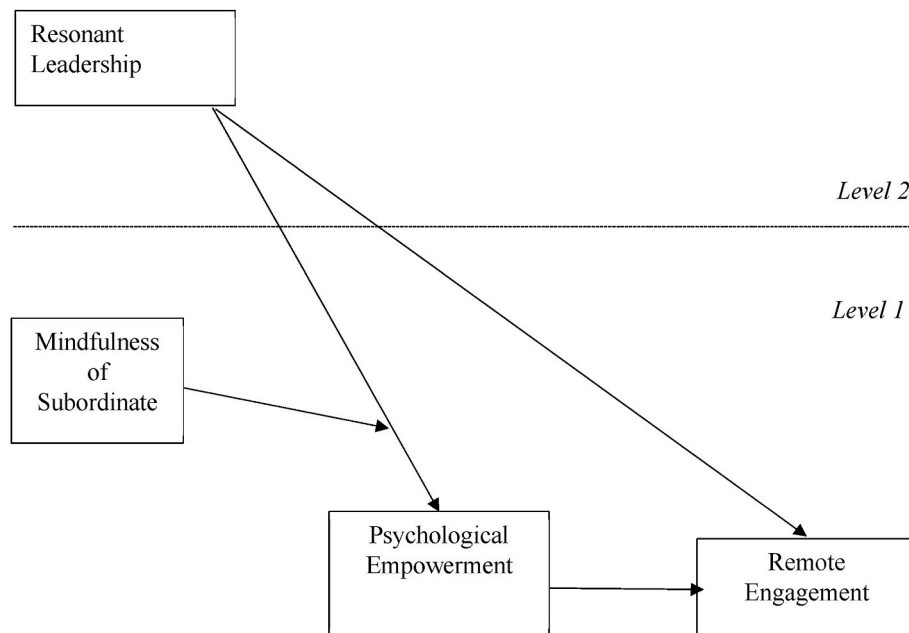


Fig. 1. A conceptual model.  
Source: Authors' depiction.

using the questionnaire developed previously (Schermuly et al., 2013; Spreitzer, 1995). This 12-item scale captures the following four aspects of psychological empowerment proposed by Spreitzer (1995): meaningfulness (e.g., 'The work I do is very important to me'), impact (e.g., 'I have a great deal of control over what happens in my department'), competence (e.g., 'I am confident about my ability to do my job'), and self-determination ('I have significant autonomy in determining how I do my job').

### 3.2.3. Remote engagement

The 17-item Utrecht work engagement scale ( $\alpha = 0.90$ ) developed by Schaufeli et al. (2006) was adopted with a minor change while making the statements. For instance, the item stating 'time flies while working remotely' was rated on a 5-point scale from 'never' to 'always'.

### 3.2.4. Mindfulness

This study adopted the method of Höfling et al. (2011) to measure mindfulness ( $\alpha = 0.83$ ) as it bears a strong similarity to the original 15-item MASS scale. 'It seems that the subordinate is running automatically without much awareness of what he/she is doing' is an example of items that were rated by the team leaders to measure the mindfulness of their subordinates.

### 3.2.5. Control variables

Demographic and organisational variables that have been shown to correlate with at least one of our main variables in previous empirical studies were included as control variables in this study. These variables included gender, age, marital status, education, industry, and company size among other variables (Rigg et al., 2014; Spreitzer et al., 1997; Sullivan & Lewis, 2001).

## 4. Results

### 4.1. SEM results

Discriminant validity was assessed using AMOS. A measurement model was developed to confirm the discriminatory and convergent validity of the constructs at an individual level. The results showed a satisfactory fit for the three-factor model consisting of mindfulness,

psychological empowerment, and remote engagement, thereby confirming the convergent validity ( $\chi^2/df(899) = 2.49$ , CFI = 0.96, NFI = 0.95, SRMR = 0.06). Factor loadings ranged from 0.63 to 0.89. Discriminatory validity was verified using the AVE scores of each construct. These scores ranged from 0.76 to 0.84, which exceeded the threshold value of 0.50 (Bagozzi et al., 1991; Browne & Cudeck, 1992; Hu & Bentler, 1999).

### 4.2. Test of aggregation

The guidelines of Hayes (2006) were followed to test for multilevel existence in the study. Therefore, aggregation indices, such as inter-rater reliability ( $r_{wg}$ ) and intra-class coefficient (ICC) for the level 2 resonant variable, were calculated to confirm the aggregation of the individual-level measures that constitute resonant leadership. In accordance with Bliese's study (2000), ICC (1) and ICC (2) for resonant leadership were 0.17 and 0.89, which satisfy the threshold condition of  $>0.05$  and  $>0.70$ , respectively. The  $r_{wg}$  was 0.84, which also fulfilled the criteria suggested by James et al. (1993) for testing the proposed hypotheses using hierarchical linear modelling (HLM). A null model was also developed to establish group variance in psychological empowerment and remote engagement before proceeding with HLM. The results of the null model showed significant variances of 30% and 32% for psychological empowerment and remote engagement, respectively.

### 4.3. Test of hypothesis

Table 1 illustrates the demographic characteristics, correlations among variables, and reliability estimates at both levels (individual and project team). The HLM test is presented in Table 2. Using HLM 7.0, a series of models ranging from 1 to 10 was used to examine the proposed hypotheses.

All demographic variables were controlled for because of their confounding effects on the focal variables. The results showed significant relationships between resonant leadership and remote engagement ( $\gamma = 0.15$ ,  $p < 0.05$ ; Model 5 in Table 2) and between resonant leadership and psychological empowerment ( $\gamma = 0.19$ ,  $p < 0.01$ ; Model 1 in Table 2), thereby leading to the acceptance of hypotheses 1 and 2. Similarly, the results showed a positive association between psychological

**Table 1**  
Descriptive statistics and correlation for individual- and team-level variables.

Sl. No.	Variables	Mean	SD	1	2	3	4	5	6	7	8
<i>Level-1 Variable</i>											
1.	Age(S)	24.7	1.68	1							
2.	Gender(S)	1.20	1.43	0.01	1						
3.	Education(S)	1.01	0.56	0.01	0.03	1					
4.	Position tenure(S)	2.05	0.64	-0.06	-0.03	-0.02	1				
5.	Company Tenure(S)	2.74	1.13	0.03	0.01	0.04	0.06	1			
6.	Psychological Empowerment	3.68	0.32	0.01	-0.03*	0.02	0.04*	0.02	(0.86)		
7.	Remote Engagement	3.91	0.38	0.05	-0.07*	0.04	0.07*	0.03	0.36**	(0.90)	
8.	Mindfulness (S)	3.83	0.22	0.02*	0.03	0.04	0.01	0.02	0.21*	0.24**	(0.83)
<i>Level-2 Variable</i>											
1.	Age(L)	34.02	2.01	1							
2.	Gender(L)	0.75	1.66	0.0	1						
3.	Education(L)	1.45	0.89	0.02	0.0	1					
4.	Position Tenure(L)	5.23	3.29	-0.07	0.03	0.04	1				
5.	Company Tenure(L)	10.19	3.01	0.05	0.01	0.02	0.02	1			
6.	Resonant Leadership	3.95	0.29	0.03	-0.03	0.02	-0.06	0.02	(0.78)		
7.	Team Size	5.03	0.25	0.01	0.02	0.05*	0.01	0.02	-0.06*	1	

Notes. Individual level N = 406; project team level N = 56; values on the right side indicate Cronbach's alpha coefficient.

\*p < 0.05; \*\*p < 0.01.

**Table 2**  
Sequential model testing in the prediction of follower's remote engagement.

Variables	Psychological Empowerment			Remote Engagement					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 9	Model 10	
<i>Level 1</i>									
Intercept	5.62**	5.96**	6.12**	6.43**	6.79**	7.01**	7.19**	7.55**	
Age	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	
Gender	-0.02*	-0.02*	-0.01*	-0.04*	-0.03*	-0.03*	-0.03*	-0.02*	
Education	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	
Position Tenure	0.03*	0.03*	0.02*	0.03*	0.02*	0.02*	0.01*	0.01*	
Company Tenure	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	
Psychological Empowerment				0.26** (0.04)		0.28* (0.03)		0.29** (0.04)	
Mindfulness of Subordinate		0.16* (0.03)					0.15*(0.02)	0.12*(0.02)	
<i>Level 2</i>									
Age	0.03	0.03	0.02	0.03	0.02*	0.03*	0.02	0.02	
Gender	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.01	
Education	0.01	0.01	0.00	0.02	0.02	0.02	0.02	0.02	
Position Tenure	0.05	0.05	0.04	-0.04*	-0.03*	-0.03*	-0.03*	-0.02	
Company Tenure	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	
Team Size	0.01	0.01	0.01	0.02*	0.02*	0.01*	0.01*	0.01*	
Resonant Leadership	0.19* (0.06)				0.15* (0.03)	0.11 (0.02)	0.16** (0.03)	0.14 (.02)	
<i>Cross-Level</i>									
Resonant Leadership × Mindfulness of Subordinate			-0.21** (0.02)					-0.19** (.03)	
Deviance	638.31	634.43	626.46	593.77	591.26	587.45	581.39	576.20	
ΔD (Δdf)		3.88(1)	7.97(1)		2.51(1)	3.81(1)	6.0(1)	5.19(2)	

Note. Team members level N = 406; project team level N = 56; entries are estimations of fixed effects with robust standard errors. Estimations of the random variance components are in parentheses. ΔD is the difference deviance between two models; Δdf is the difference degree of freedom between two models.

\*p < 0.05; \*\*p < 0.01.

empowerment and remote engagement ( $\gamma = 0.26, p < 0.01$ ; Model 4 in Table 2), thus confirming hypothesis 3.

To test the mediation effect of psychological empowerment, this study adopted the four-step procedure of the mediation test by Kenny et al. (1998). Three of the steps were already performed while testing hypotheses 1–3 earlier. The fourth step was conducted by introducing psychological empowerment after the entry of resonant leadership. We found that the relationship between resonant leadership and remote engagement became insignificant as a result ( $\gamma = 0.11, p > 0.10$ ; Model 6 in Table 2), thereby confirming hypothesis 4. Moreover, the deviance test results revealed model fitness because of smaller deviance ( $\Delta\chi^2(1) = 3.81, p < 0.01$ ), thereby fulfilling the required criteria (De Jonge et al., 1999). The Monte Carlo method, a form of parametric bootstrapping, was used to generate a 95% confidence interval (CI) for the average

indirect effects of the resonant leadership. This was done using 20,000 random draws from the assessed sampling distribution of the estimates (Selig & Preacher, 2008). The results of bootstrapping with 20,000 samples indicated that psychological empowerment completely mediates the relationship between resonant leadership and remote engagement. The bias-corrected 95% CI of the indirect effect was [0.05, 0.26], which excluded 0. This led to complete acceptance of the mediating effect of psychological empowerment on the relationship between resonant leadership and remote engagement.

Similarly, the moderation and moderated mediation tests to examine hypotheses 5 and 6 were performed using the Monte Carlo method. The interaction effects of mindfulness and resonant leadership on psychological empowerment were found to be significant and negative ( $\gamma = -0.21, p < 0.01$ ; Model 6 in Table 2), which is also indicated by the slope

shown in Fig. 2. The results of the slope test showed that resonant leadership was more positively related to psychological empowerment when mindfulness was lower ( $B = 1.03$ ,  $p < 0.01$ ) and less so when mindfulness was higher ( $B = 0.64$ ,  $p < 0.05$ ). This led to the complete acceptance of hypothesis 5.

Subsequently, a moderated mediation test was conducted by adopting the Monte Carlo method to calculate bias-corrected 95% CIs for the conditional effects of mindfulness on the indirect relationship between resonant leadership and remote engagement. The results were found to be significant based on 20,000 resamples ( $\Delta\gamma = -0.06$ ; 95% CI  $[-0.10, 0.12]$ ), thereby confirming hypothesis 6.

## 5. Discussion and conclusion

This study aimed to investigate the conjectures surrounding resonant leadership, mindfulness, psychological empowerment, and remote engagement based on the stated assumptions. Based on these findings, we can claim that our conjectures are well supported. This concurs with previous studies, wherein the role of mindfulness in buffering leadership processes was significant and attenuated the first path of the mediation model (Hülshager et al., 2015). Concurrently, resonant leadership directly or indirectly predicts work engagement (Bawafaa et al., 2015; Wagner et al., 2013), highlighting the significance of the mediating role of psychological empowerment (Bhatnagar, 2012).

### 5.1. Theoretical implications

The major theoretical contributions of this study are as follows: first, this is the first study to establish relationships among constructs such as resonant leadership, psychological empowerment, mindfulness, and remote engagement in a single study. This adds novelty to the existing literature by establishing a cross-level association between resonant leadership, psychological empowerment, and remote engagement. This confirms that the micro-organisational phenomenon during unprecedented changes is embedded in the macro-organisational context. This indicates that intra- and inter-individual fluctuations in work engagement and psychological empowerment can be attributed to differential leadership treatment within the team (Kozlowski & Klein, 2000).

Second, drawing on the theory of intentional change, the findings theorise and test the mechanism under which resonant leadership can engage employees remotely in the context of COVID-19. Such indirect cross-level effect is mediated through psychological empowerment because the resonant leader believes in providing positive experiences by strengthening psychological abilities. In turn, it augments the optimal functioning of the subordinates to stay engaged (Boyatzis, 2006). Thus,

the tendency of resonant leadership to undergo self-renewal in times of crisis invokes a positive emotional attractor tipping point among subordinates. Such self-renewal is associated with hope and vision, which becomes a potential driver to arouse a sense of psychological empowerment among subordinates by means of discovery and emergent behaviour. In turn, it brings intentional changes among subordinates to overcome the challenges of an unprecedented crisis without deterring their engagement level. Thus, the relationship between variables is unravelled through cross-level mediation, which is scarcely available in the literature.

Third, the fact that resonant leadership, work engagement, and psychological empowerment are context-specific or generic in nature (Alotaibi et al., 2020) was demonstrated in this study, which further adds novelty to the existing literature. The cross-level effect of resonant leadership on psychological empowerment is stronger only when subordinates experience a low level of mindfulness. Thus, the context of the subordinates' mindfulness determines the varying levels of influence of resonant leadership on the psychological empowerment of subordinates, thereby shedding light on the mechanism under which resonant leadership operates. It also indicates that a high degree of mindfulness of subordinates during COVID-19 can lower the degree of subordinates' dependability on the resonant leader to obtain a sense of autonomy and empowerment and stay engaged. This is probably in the context of the high-power distance culture of India (Hofstede, 1980), wherein self-regulation of a subordinate is not inclined towards invoking positive emotional attractor tipping points of others in teams as a prosocial act. It is the leader who owns accountability by bringing intentional changes to the ideal image of the subordinates. Such changes conform to the normative standards of the team and organisation (Seijts et al., 2004), thereby reducing anxiety and confusion among the subordinates, which, in turn, keep them engaged.

### 5.2. Practical implications

The findings of this study have profound implications for the IT industry, where work is performed in teams and projects, and the effect in each layer of the organisation will be treated as a reference point for other layers (Chen et al., 2007), according to the assumptions in ICT. Given the COVID-19 pandemic and its challenges on the IT industry (Aggarwal, 2022; Russo et al., 2021; Suárez-Albanchez et al., 2021), this study sheds light on the influence of resonant leadership on software professionals' remote engagement by adopting multilevel modelling. It emphasises the role of a resonant leader in creating resonant relationships across layers to bring sustainable and intentional changes. Resonant leaders influence their subordinates in the digital space (McKee & Massimilian, 2006) by providing emotional glue to bind the team members for such sustained changes (Boyatzis, 2006). By virtue of their self-renewal tendencies (Boyatzis, 2006; Goleman et al., 2002), they can have a valuable impact on the competence of the subordinate to perform a task and subsequently find meaning in it. Therefore, the IT industry should conduct leadership development programmes for leaders to gain insights into the enduring attributes demonstrated by a resonant leader, such as mindfulness, hope, and compassion (Lenka & Tiwari, 2016). IT companies must design multiple training interventions to foster the emergent behaviour of the resonant leaders across the levels of hierarchy or at the level of the project's team. They could be tuned to the company's vision and put on a discovery mode at every phase of the training programme through mindfulness exercises and yoga. Such a discovery mode will be accompanied by pull attractors, of which a positive emotional attractor would dominate the negative emotional attractor. In turn, it could bring sustained change to overcome unprecedented crises in the future. A positive emotional attractor will invoke positive affect, which will eventually lead to self-empowerment among subordinates, thereby increasing the likelihood of the latter staying remotely engaged amidst resource constraints. Thus, the training programmes should be designed based on the assumptions postulated in

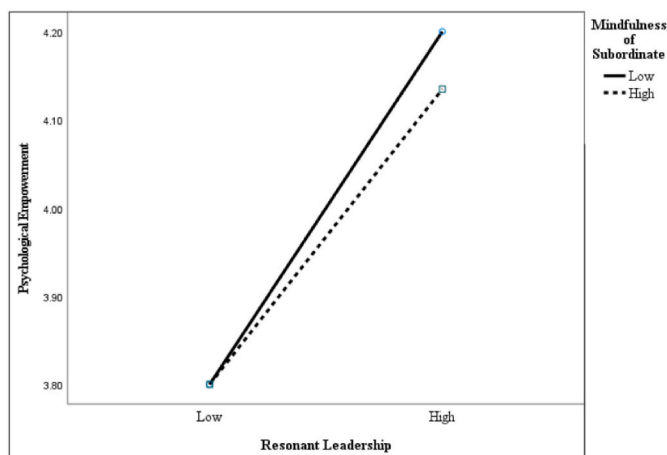


Fig. 2. Moderation effect of mindfulness.  
Source: Authors' depiction.

ICT. Self-awareness and emotional intelligence could be the focal areas of improvement, along with appreciative enquiry, so that the leaders thrive on their capabilities and build them further as per the desired state expected by the subordinates (Van Oosten, 2006).

### 5.3. Limitations

Although the study's findings were based on a rigorous method, wherein the nature of the data was multi-wave and multi-source with two organisational layers considered to draw the relationship between the proposed constructs, the cross-sectional design of the study did not permit a conclusive inference. Therefore, the causality among the constructs that draw the pathways from resonant leadership to remote engagement cannot be inferred because the data are a one-time sample (Cole & Maxwell, 2003). Future studies could repeat the model by collecting data across multiple time points and sampling volunteers (who might be in contractual terms and conditions) or from other sectors because the factors determining employee engagement are occupation-specific (Chaudhary & Rangnekar, 2017).

The snowball method of data collection may involve bias as the volunteers may have referred to respondents showing interdependency in the data. The respondents also shared similar personalities and interests. Thus, this limits the generalisation of the study, wherein personality factors that determine remote engagement differ (Macsinga et al., 2015). Moreover, subordinates were not trained in mindfulness; therefore, future studies may avoid reducing common method bias by using randomisation and quasi-experimental methods.

This study was context-specific, wherein the influence of COVID-19 was overpowering (Chanana & Sangeeta, 2021). The determinants of remote engagement might be different from the engagement in the workplace and in multinational settings (Rutishauser & Sender, 2019). This limits the generalisability of the study. Future studies could replicate the empirically validated model of this study by using a longitudinal study.

### 5.4. Conclusion

Given the literature gap, the study has investigated the conjectures involving resonant leadership, psychological empowerment, remote engagement, and mindfulness in the context of COVID-19 based on the data collected from 15 large-sized IT companies. This is the first study to examine the integration of constructs such as leadership, work engagement, and psychological empowerment from the lens of ICT, thereby providing a sound theoretical foundation. Furthermore, it also deliberates on a conditional mechanism under which the association relationship among leadership, psychological empowerment, and remote engagement exists. According to this study, the subordinate's mindfulness buffers the relationship among such focal variables, thereby establishing the conditional mechanism. Furthermore, the study applies the assumptions postulated in ICT, which states that resonant leadership is a profound driver of subordinates' intrinsic motivation to bring intentional change in times of crisis so as to stay engaged. The resonant leader ensures to overpower the challenges of the pandemic and stay engaged through mediation mechanisms, that is, psychological empowerment. However, such associations are elicited under a condition when a low level of subordinates' mindfulness prevails.

The analysis has thrown deep insights into the context under which the association between resonant leadership and remote engagement exists. In particular, the results confirm the indirect relationship between resonant leadership and remote engagement through the mediating mechanism of psychological empowerment, which has been anecdotally established in previous studies in a non-crisis context (Bawafaa et al., 2015; Bhatnagar, 2012; Wagner et al., 2013). However, the additives provided are more distinct when resonant leadership is more positively related to psychological empowerment and remote engagement under a circumstance when subordinates' mindfulness is

lower and less so when their mindfulness is higher.

From the managerial vantage point, the findings add value to the IT industry, wherein training programmes on mindfulness could be devised to groom emergent behaviour among IT leaders. It would well equip them to handle multiple complexities that are salient features of the IT industry and uncertainties in the environment, such as unprecedented crises.

Furthermore, the study illustrates limitations, which can be addressed in future studies. First, the longitudinal study can be conducted in an industry of the same and different nature to confirm the generalisation of the study. Second, common method biases can be mitigated by using randomisation and quasi-experimental method.

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### Declaration of competing interest

None.

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