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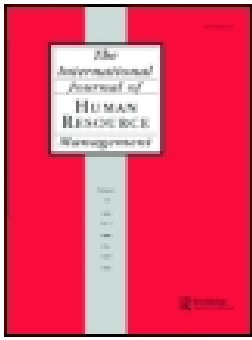


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Learning organization and work engagement: the mediating role of employee resilience

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ABSTRACT

As automation and structural transformations mark the new digital realities of the twenty first century, contemporary organizations demand a highly resilient and engaged workforce to sustain their competitive edge. Despite an eminent literature revolving around learning organization in the management discourse, there is a lack of research investigating the effect of learning organization on employee resilience and work engagement. With this precept in mind, this study developed and tested a mediation model linking learning organization to employee resilience and work engagement. The present study draws on the tenets of Fredrickson's broaden-and-build theory and conservation of resource theory for supporting the study results. This study used cross sectional surveys of 300 IT professionals in India. Structural equation modeling was used for empirically testing the study hypotheses. Additionally, the study utilized Preacher and Hayes mediation analyses to investigate the mediating effect of employee resilience on the relationship between learning organization and work engagement. The results revealed significant relationship between variables of the study and shows that learning organization positively effect employee resilience and work engagement. The findings suggest that employee resilience partially mediate the effect of learning organization on work engagement. This study offers concrete insights to HR managers for fostering employee resilience which in turn can play a key role in building a highly engaged workforce. Future implications for theory and HRM practitioners are discussed.

KEYWORDS

Learning organization; employee resilience; work engagement; IT industry; India

Introduction

It is not the strongest of the species who survive, or the most intelligent; rather it is those most responsive to change.

-Charles Darwin

The above proclamation stands significant in today's competitive and turbulent environment which makes it crucial for organizations to continuously adapt and transform (Allvin, Aronsson, Hagström, Johansson, & Lundberg, 2011). Amplified competition, escalating technological advancements, changes in workforce demographics and the propagation of international global agreements and standards necessitates organizations to transform rapidly than ever before. The contemporary organizations require both adaptive and generative proficiencies and thus, demand a pool of resilient and engaged employees (Lee, Vargo, & Seville, 2013). Given the volatile and the multifaceted nature of work, resilience may prove beneficial for employees to quickly adapt to the erratic expectations, and perform effectively even in arduous and emotionally stressful situations (Fredrickson, Tugade, Waugh, & Larkin, 2003). Resilient employees not only sustain through challenges, they also exhibit confidence in their abilities which ultimately lead to enhanced levels of work engagement (Cooke, Cooper, Bartram, Wang, & Mei, 2016; Hodliffe, 2014). Therefore, employee resilience could be seen as an imperative strategic resource for organizations in fostering work engagement.

Over the years, numerous case studies, theoretical reviews, and applied articles have enunciated the eminent role of resilience (Langvardt, 2007; Maddi & Khoshaba, 2005; Payne, 2009). Yet, the vast majority of literature revolving around resilience fails to provide any explanation and virtually offers scant evidence about its development and practical implication at workplace (Rutter, 2012; Winwood, Colon, & McEwen, 2013). In fact, existent literature on resilience till date treats resilience as a trait or resource rather than as a state and developable capacity which can be fostered at workplace (Moenkemeyer, Hoegl, & Weiss, 2012). Indeed, resilience interventions are still pristine at workplace, and research is insufficient to assess its practical outcomes. Thus, recognizing practices which foster employee resilience may prove beneficial for employees, particularly IT organizations.

Need and context of the study

The concept of employee resilience holds a significant place for IT organizations since IT employees' work in an exigent environment where work roles are mentally challenging and demanding with extensive projects and aggressive timelines and hence results in higher levels of job stress and turnover rates (Bagga, 2013; Messersmith, 2007). Thus, retaining technical and proficient workers pose a key challenge for these firms (Nair & Vohra, 2010). Additionally, with entry of multiple players, regulatory changes and technology advancements across the globe, Indian IT sector is facing incessant challenges and fierce competition from rival overseas firms and thus has to look for new ways to engage their workforce to retain its competitive verge (Aon Hewitt, 2015).

Research shows empirical support that stress related consequences, such as burnout and attrition, can be avoided or buffered by a higher level of resilience (Dunn, Iglewicz, & Moutier, 2008). Also, studies report that highly resilient

individuals are better able to cope with adversity and changes (Rossi, Meurs, & Perrewé, 2013). However, despite the burgeoning literature reflecting its positive outcomes, HRM practitioners still lacked to view resilience as an ability that can be developed proactively among employees (Robertson, Cooper, Sarkar, & Curran, 2015; Wang, Cooke, & Huang, 2014). Therefore, it is important to understand the mechanism of how learning organization fuel employee resilience and work engagement.

Consequently, by drawing on the theoretical perspectives, namely the Fredrickson's broaden-and-build theory (2001) and conservation of resource theory (Hobfoll, 1989, 2001), the present study argues that learning organization may prove to be a significant trigger for fostering positive feelings among employees (Blasdel, 2015; Fredrickson, 2001). Specifically, when employees exhibit positive emotions, it triggers an 'upward-spiral' of psychological resources which fuels resilience among employees, and in turn could foster work engagement.

Work engagement has emerged as a significant concept within the field of organizational and positive psychology (Seligman & Csikszentmihalyi, 2000). Researchers have reported significant implications of work engagement on employees' attitude and discretionary workplace behaviors (Babcock-Roberson & Strickland, 2010; Bakker & Demerouti, 2008). However, despite the important consequences of work engagement, research on drivers of work engagement is inadequate and lacks a cohesive direction (Wefald & Downey, 2009). Over the years, researchers affirmed various predictors of work engagement, for instance occupational self- efficacy and human resource development climate (Chaudhary, Rangnekar, & Barua, 2012); psychological empowerment (Bhatnagar, 2012); and job resources (Quinones, Van den Broeck, & De Witte, 2013). Nevertheless, there is minimal literature that investigated the relationship between work engagement and employee resilience. In fact, prior research considered resilience as a cognitive component of engagement (Salanova, Agut, & Peiró, 2005), which overshadows the role of employee resilience as an antecedent to work engagement. No literature till date, had examined the relationship between learning organization, employee resilience and work engagement in IT organizations in India.

The current study advocates an integrated perspective by examining the effects of learning organization and employee resilience on work engagement, thus providing a more unified approach. The examination of learning organization and employee resilience as antecedents to work engagement serves three research purposes: *first*, it adds to the current literature on resilience by offering empirical evidence on its implication at workplace. *Second*, the study extends the literature on work engagement by investigating the role of learning organization and employee resilience as drivers of work engagement. *Third*, the study explain the underlying mechanism of how learning organization contribute to work engagement via a mediational pathway in the form of employee resilience.

Literature review and hypotheses development

Research shows evidence that highly resilient individuals have better coping and adaptive abilities when faced with adversity, such as work related stress (Hodges, Keeley, & Troyan, 2008). Howard (2008) reported the significance of resilience in protecting employees from the adverse impacts of work related adverse situations. Grant and Kinman (2012) also highlighted the inevitability of resilience for employees working in emotionally challenging and complex occupations. However, in spite of the demand for a highly resilient and engaged workforce in existent multifaceted operative milieu of service organizations, there is scant literature investigating the nexus between learning organization, employee resilience and work engagement. Subsequently, this study aims to contribute to the body of knowledge on employee resilience and its role in enhancing work engagement by drawing on the theories of Fredrickson's (2001) broaden-and-build theory and conservation of resource theory (Hobfoll, 1989, 2001).

Fredrickson's (2001) broaden-and-build theory suggests that the organizational practices that offer autonomy, competency, and meaningfulness should upsurge experiences of positive emotions among employees. In turn, positive emotions such as exuberance and pride expand individual's ambit of perceptions which results in the development of personal resources, encompassing physical and psychological resources over time. Given this fact, the study posits that learning organization should invoke ambit of positive emotions among employees such as love, joy and pride by providing a wide range of resources. These positive emotions have been shown to generate employee resilience and work engagement (Frederickson, 2001). Previous research has also reported a significant association between positive emotions and work engagement (Bakker & Demerouti, 2008).

The doctrine of the conservation of resource theory states that people attempt to achieve, sustain, and safeguard resources which they value (Hobfoll, 1989, 2001). Such resources can be objects, individual characteristics, settings, or drives which in turn are invested by individuals to protect against or recuperate from a loss or derive profits. In other words, when individuals are offered with ample job resources, they will be more likely to elicit psychological resources which results in the creation of 'resource caravans'. Research shows that such individuals show higher level of concordance between their personal and organizational goals and are more innately and/or extraneously motivated to achieve them (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). In essence, highly resilient employees' believe in their abilities and thus become more engaged in their work roles. The hypothesized framework of the study is shown in Figure 1.

Learning organization

Learning organization has become an organizational panacea in the twenty first century (Ulrich, Jick, & Von Glinow, 1993). The learning organization is defined

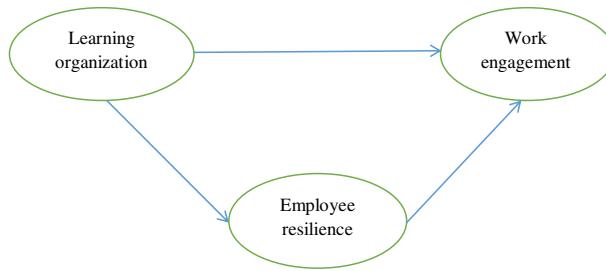


Figure 1. Hypothesized model.

as an organization that fosters continuous learning and persistently adapt to the transforming environment. Senge (1990) defined learning organization as one ‘where people continuously expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together’. A learning organization is ‘a place where employees excel at creating, acquiring, and transferring knowledge’ (Garvin, Edmondson, & Gino, 2008). Watkins and Marsick (1993) further expanded this definition and stated that ‘learning organization is one that learns continuously and transforms itself’. Watkins and Marsick (1996) proposed seven dimensions of learning organization: (1) *Continuous learning* represents an organization’s effort to create learning opportunities for all its members; (2) *Inquiry and dialog* refers to creating a culture that supports questioning and offers feedback to its employees; (3) *Team learning* reflects an organization’s effort to foster the spirit of collaboration and help the team members to become familiar with different ways of thinking; (4) *Empowerment* indicates the process which involve employees’ in creating and implementing a shared vision and motivate individuals to fulfil their obligations; (5) *Embedded system* allows employees to acquire and share information and provide opportunities for mutual learning at the workplace; (6) *System connection* reflects actions to connect the organization to its internal and external environment; and (7) *Strategic leadership* demonstrate the extent to which leaders shape, improve and support learning to achieve better results.

Relationship between learning organization and employee resilience

Prior research emphasized the role of learning organization in fostering individual, team, and organizational learning, which in turn enhance performance outcomes (Akhtar, Arif, Rubi, & Naveed, 2011; Ho, 2011; Ponnuswamy & Manohar, 2016). However, with rapid globalization and technological advancements, it has become critical for organizations to focus on fostering adaptation, and engagement levels of employees to remain ahead of competitors (D’Aveni, 1998; Hodliffe, 2014). Thus, nurturing resilience among employees is crucially needed for adapting and responding effectively to environmental changes (Wang et al., 2014). This

line of thought is echoed by recent research which demonstrates the vital role of employee resilience in augmenting workplace outcomes (e.g. Cooke et al., 2016; Waddell, 2015).

A glance at the literature demonstrates a plethora of conceptual and operational definitions of resilience (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007; Herrman et al., 2011); nevertheless, they are dominated by two commonalities. Firstly, resilience involves complexity and adversity, and secondly, they reflect positive adaptation. Primary research on resilience focussed on its dispositional attributes or individual's trait and defined it as 'a personality characteristic that moderates the negative effects of stress and promotes adaption' (Wagnild & Young, 1993). However, the present study departs from the dispositional view of resilience and is guided by the conceptualization given by Luthans (2002) that defined resilience as the 'developable capacity to rebound or bounce back from adversity, conflict, and failure or even positive events, progress, and increased responsibility'. This study conceptualized employee resilience as an adaptive and resource-utilizing capacity that can be facilitated and developed by offering organizational resources (Rossi et al., 2013).

Given the developmental nature of resilience, the imperative challenge faced by investigators is to identify the systems and practices for developing resilience among employees (Davis, Luecken, & Lemery-Chalfant, 2009; Masten & Reed, 2002). Specifically, this study advocates that resilience could be taught, practiced, and developed as a skill among employees. Given this precept, the present study investigates the role of learning organization in fostering employee resilience. Although there is a scarce research on any direct links, earlier research provides evidence for supporting this assertion (Cooke et al., 2016; Cooper, Liu, & Tarba, 2014; Hodliffe, 2014; Tian et al., 2015). For e.g. Hodliffe (2014) reported the role of learning culture, empowering leadership, employee participation and corporate communication in fostering employee resilience. Murray and Donegan (2003) argue that learning organization fosters favorable culture for innovation, which improves the behavior and adaptive capability of individuals. Research shows that when employees are constantly encouraged for addressing challenges and find innovative ways of dealing with changes, they are likely to develop enhanced change readiness, which stimulates employee resilience (Sundblad, Älgevik, Wanther, & Lindmark, 2013). Ashton, Green, James, and Sung (1999) reported that the ability to learn and to convert learning into practice creates extraordinary value for individuals, teams, and organizations. This in turn enhances employees' confidence in their personal skills, which promote the development of psychological capability of employees. When employees are allowed to discuss their concerns and divergent opinions freely without any fear of negative repercussions, this augments employees' perception of value towards their organization (Smith, 2005). In addition, the extent to which employees are allowed to participate in the change initiatives build employees trust in management and sequentially affect their attitude towards change (Lines, Selart, Espedal, & Johansen, 2005; Oreg, 2006; Stanley,

Meyer, & Topolnytsky, 2005). Research suggests that empowered employees deal more effectively with changes and are more supportive and adaptable to change processes (Gill, 2002). Moreover, when organizations ensemble employees roles and tasks to larger organizational missions and purposes, it subsequently promotes positive emotions among employees. According to Frederickson's broaden-and-build theory (2001), positive emotions lead to the development of personal psychological capabilities and thus generate employee resilience (Bunderson & Thompson, 2009; Duffy & Sedlacek, 2007). Therefore, drawing on the aforementioned literature and theory, it is expected that learning organization positively relate with employee resilience. Thus, it can be assumed that:

H1: Learning organization is positively associated with employee resilience.

Relationship between work engagement and employee resilience

Over the past decade, work engagement has prompted substantial interest among both scholars and practitioners (Bakker, Demerouti, & Sanz-Vergel, 2014; Ghadi, Fernando, & Caputi, 2013; Quinones et al., 2013). Researchers have reported significant implications of work engagement on employees' attitude and discretionary workplace behaviors, employees' performance and commitment (Kimberley, Bakker, Demerouti, & Heuvel, 2015; Quinones et al., 2013; Yalabik, Rossenberg, Kinnie, & Swart, 2015). The construct of work engagement was initially theorised by Kahn (1990) and further operationalized by Maslach, Jackson, and Leiter (1997). The present paper is guided by Schaufeli, Salanova, González-romá, and Bakker (2002) conceptualization of work engagement who defined it as 'a positive, fulfilling, work-related state of mind'. Literature shows evidence of the liaison of psychological factors and work engagement, however, research is still inadequate for supporting the role of employee resilience as driver of work engagement (Wefald & Downey, 2009). Previous studies reported that work engagement and job resources as well as personal resources have been linked reciprocally. Xanthopoulou et al. (2009) also found that job resources (e.g. empowerment, supervisors support and development feedback, and development opportunities) and personal resources (e.g. self-efficacy and optimism) predict work engagement. Nevertheless, there is minimal literature that has examined its relationship with employee resilience.

Literature shows that resilient employees not only cope through challenges, but possess additional skills to successfully navigate through workplace adversities. For instance, resilient individuals possess numerous positive attributes such as optimistic and energetic outlooks (Block & Kremen, 1996), curiosity and openness to new experiences (Waugh, Fredrickson, & Taylor, 2008). Consequently, energetic and confident employees show higher readiness to face challenges at workplace, which ultimately reinforce work engagement. Moreover, research shows that resilient employees are more capable to build quality relationships and social support at work (Fredrickson et al., 2003). The presence of social support and meaningful

relationships has been reported to be significantly associated with work engagement (Christian, Garza, & Slaughter, 2011; Kahn, 1990). Thus, resilient employees endure adversity, develop meaningful work relationships, and possess optimistic life perspectives that evoke enhanced levels of work engagement.

Subsequently, drawing on the conservation of resource theory (Hobfoll, 1989, 2001) and Frederickson's broaden-and-build theory (2001), we argue that employee resilience foster work engagement as resilient employees exhibit confidence in their capabilities and perceive their workplace as ingenious and propitious, which ultimately boost work engagement (Llorens, Schaufeli, Bakker, & Salanova, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). For e.g. Bakker, Gierveld, and Van Rijswijk (2006) demonstrate that resilience contribute to the motivational process and generate engagement among school principals in primary teaching. Sweetman and Luthans (2010) reported that psychological capital generates work engagement through positive emotions. Waddell (2015) investigated the link between resilience and work engagement in health nurses and found that both positive emotions and hope facilitate goal directed behavior, which influence work engagement (Ouweneel, Le Blanc, Schaufeli, & van Wijhe, 2012). Moreover, Karatepe and Olugbade (2009) also supported their findings on the basis of the conservation of resource theory and found that employees with strong belief in their abilities become more engrossed in their work. Specifically, energetic employees show deep involvement and are fully enthralled in their work roles. Cooke et al. (2016) highlighted the role of employee resilience in fostering work engagement in banking industry in China. Therefore, grounding on the previous research and the preceding theories, we propose that employee resilience contribute to work engagement, leading to the following hypothesis:

H2: Employee resilience is positively associated with work engagement.

Mediating effect of employee resilience

Previous research indicates that resilient people are more capable to face unprecedented changes and adapt effectively to challenging roles, tasks, and situations (Shin, Taylor, & Seo, 2012). Resilience support employees to buffer against stress and allow them to adapt to stressful and dynamic environments (Rutter, 2006). Luthans, Vogelgesang, and Lester (2006) defined resilience as individual's developable ability to 'bounce back' from adversity and grow and strengthen due to this adjustment. Torres and Fyke (2013) argued that resilience can be developed as a process that is contextual and interactive. Based on the conservation of resource theory (Hobfoll, 1989, 2001), researchers have demonstrated that employee resilience, as an aspect of personal resource positively effect work engagement (Karatepe & Olugbade, 2009; Paek, Schuckert, Kim, & Lee, 2015).

A number of studies have shown that employees become engaged when they are offered with organizational resources such as leaders support and developmental feedback, autonomy, working flexibility, recognition and rewards, and

an environment of trust and loyalty (Aguinis, Gottfredson, & Joo, 2012; Kuvaas & Dysvik, 2010; Menguc, Auh, Fisher, & Haddad, 2013; Rees, Alfes, & Gatenby, 2013). It has been reported that employees' shows higher level of work engagement when they are provided with continuous opportunities to grow and develop within the organization (Glen, 2006). Olivier and Rothmann (2007) reported that 'when organizations offer the physical, emotional and cognitive resources to employees, they will highly engage in their work roles and may disengage in the absence of these imperative resources'. Researchers argue that learning organization not only develop employees skills and capabilities, but also influence the level of efforts at workplace and commitment towards the organization (Bhatnagar, 2007; Paul & Anantharaman, 2004). Kyoung Park, Hoon Song, Won Yoon, and Kim (2013) reported that learning organization influence work engagement in Korean firms (manufacturing, construction, IT, and electronic). Also, Hoon Song, Hun Lim, Gu Kang, and Kim (2014) provide empirical evidence of the mediating effect of employee engagement between team performance and learning organization culture in Korean firms.

As discussed in the prior sections of the paper, literature offers strong theoretical and empirical affirmation to support the relationship between learning organization and employee resilience, as well as employee resilience and work engagement. Following the Frederickson's theory (2001), we assert that learning organization promotes positive emotions which foster employee resilience and in turn generate work engagement. For e.g. Hodliffe (2014) reported that employee resilience leads to higher levels of engagement. Schaufeli and Bakker (2010) also highlighted that when organizations offers growth and development programmes to its employees, they in turn foster employee resilience. Following this, we argue that learning organization practices provide opportunities for eliciting positive emotions, which in turn contribute to employee resilience that subsequently leads to work engagement (Xanthopoulou et al., 2009). Thus, we hypothesize that employee resilience mediates the relationship between learning organization and work engagement.

H3: Employee resilience mediates the relationship between learning organization and work engagement.

Research methodology

Sample and data collection

The sample population of this study comprised of 300 IT employees from selected Indian IT organizations. The IT companies were chosen based on the listing of National Association of Software and Services Companies (NASSCOM, 2015) annual report with financial turnover (in INR) as a base for classification. In the current sample of the study, the companies are classified as, companies with 100–1000 million are small-scale companies; 1000–5000 million are medium-scale

companies; 5000–10,000 million are large-scale companies. Considering this list, 20 large-scale Indian IT organizations were chosen from the National capital region of India. The sample was drawn between the period of July 2015–December 2015 using non-probability purposive sampling technique. HRs of these 20 IT companies was approached, and was sent a letter describing the study and inviting participation. We received ten confirmations from organizations agreeing to participate. These ten consenting organizations represent the volunteer sample for this study. Following approval from the organizations, first contact was made by e-mail to seek agreement from the employees to participate. A total of 800 employees were sent an invitation by the HR department to volunteer for the study; out of which 500 offered to participate. For maintaining confidentiality, the questionnaires were distributed and collected by the HR personnel. The survey sheets comprised a cover letter which explained the research motive and the respondents were asked to complete their surveys and submit their response sheets in sealed envelopes to their respective human resource managers. Follow-up emails were sent to the respondents electronic mail account to complete the survey after two weeks of the delivery of the questionnaire. Out of 500 survey sheets, 400 were returned, giving a response rate of 80%. Fifty incomplete survey sheets were rejected, leaving 350 for further analysis. The data was then scrutinized for missing values and outliers and after the deletion of missing data and outliers, 50 survey sheets were rejected further, leaving 300 usable surveys for conducting data analysis. Thus, the final sample of this study comprised of 300 IT employees. We focused on the middle level IT managers as the sample population of this study as they are the executors of the plans laid down by the higher management, direct the employees', secure resources, facilitate progress and hence have a relatively high performance pressure (Paddock, 2016). Out of 300 respondents, 73% were male and 27% female. In terms of the age distribution, 38% were aged less than 30 years, 26% belongs to 30–39 years, and 31% belongs to 40–49 years and 5% aged 50 years and above. In terms of work experience, 44% had less than 5 years of work experience, 32% had 5–10 years of work experience and 24% had more than 10 years of working experience.

Measures

Learning organization

It was measured by using Yang, Watkins, and Marsick (2004) 'Dimensions of the Learning Organization questionnaire' (DLOQ). The DLOQ measures respondents' perceptions on seven learning organization dimensions which comprises 21 items relating to seven practices, namely, continuous learning opportunities, inquiry and dialog, team learning, empowerment, embedded system, system connection and strategic leadership. The Cronbach α value of the scale was 0.831. The questionnaire items were marked on a seven-point frequency-based scale (1 = Never to 7 = Always.). Sample items include 'In my organization, people identify skills

they need for future work tasks'; 'I feel confident presenting information to a group of colleagues' etc.

Employee resilience

Employee resilience was measured using 'Resilience at work scale' developed by Winwood et al. (2013), containing 20 items on a 7- point Likert scale. The scores in the scale range from 1 = strongly disagree to 7 = strongly agree. The Cronbach α value of the scale was found to be 0.864. Sample items include 'The work that I do fits well with my personal values and beliefs'; and 'I often ask for feedback so that I can improve my work performance' etc.

Work engagement

It was measured using the 9-item Utrecht Work Engagement Scale (UWES) developed by Schaufeli, Bakker, and Salanova (2006). The Utrecht Work Engagement Scale (UWES-9) has three sub-dimensions of work engagement, namely vigor, dedication, and absorption with three items each. The work engagement questionnaire was rated on a seven-point frequency-based scale (1 = Never to 7 = Always). Vigor (e.g. 'At my work, I feel bursting with energy'). Dedication (e.g. 'I am enthusiastic about my job') and absorption (e.g. 'Get carried away when I am working'). The Cronbach α value for the scale was 0.921.

Control variables

As we were primarily interested in examining the relationship between learning organization, employee resilience and work engagement, several demographic variables were controlled to rule out alternative explanations for the findings. We included age, gender and work experience as control variables in this study.

Data analysis

The collected data were analysed using statistical analysis software SPSS (20th version) and AMOS (20th version). Prior to testing the hypotheses, we conducted a confirmatory factor analysis (CFA) to evaluate the model fit of the measurement model. The data was also analysed for common method bias using Harman's 1-factor test, as all the variables in this study were collected from a single source and hence common method bias can pose a serious threat (Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003). After confirming the model fit, structural equation modeling (SEM) was employed to test the study hypotheses. Furthermore, the mediating effect of employee resilience was analysed using Preacher and Hayes (2004) mediation analysis.

Results

Descriptive statistics

Table 1 shows the descriptive statistics and correlations for the study variables. In general, the correlation results were all in the expected direction, indicating preliminary support for the relationships depicted in Figure 1.

Assessment of measurement model

A confirmatory factor analysis was initially performed on the full measurement model, comprising all latent variables (Hair, Black, Babin, Anderson, & Tatham, 2006). The full measurement model was tested for model fit which comprised of three factors and 50 items (learning organization: 21; employee resilience: 20; and work engagement: 9). As can be predicted from Table 2, the overall fit results of the initial full measurement model (*Model I*) suggested that the indices does not fit the data extremely well. Thus, careful examination of the values of modification indices and standard residual co-variances resulted in re-specification of the full measurement model (Hoyle, 2000) and lead to the deletion of four items each from learning organization and employee resilience scales. For the work engagement construct, items 2 and 5 had to be removed due to low factor loadings: item 2 had a loading of 0.09; and item 5 had a loading of 0.11; thus, leaving 7 items of work engagement scale. After the removal of ten items from the initial measurement model, the revised measurement model (*Model II*), which included three factors and 40 items (learning organization: 17; employee resilience: 16; and work engagement: 7), showed enhanced model fit with the data (Hair et al., 2006) ($\chi^2 = 382$, $df = 248$; Normed $\chi^2 = 1.54$; GFI = .942; CFI = .931; NFI = .962; and RMSEA = .030).

To further test for common method bias, we conducted Harman's single factor test, where all variables- learning organization, employee resilience and work engagement-were allowed to load onto one single factor (Hair et al., 2006). The model exhibited poor fit ($\chi^2 = 2546$; $df = 436$; Normed $\chi^2 = 5.83$; GFI = 0.456; CFI = 0.382; NFI = 0.521; and RMSEA = 0.213), which provided an evidence that a single factor did not explain majority of variance and hence common method

Table 1. Means, standard deviations and correlations for study variables.

Variable	M	S.D	1	2	3	4	5
1 Age	35.76	8.83	–				
2 Gender	1.26	0.44	0.06				
3 Work experience	8.53	4.67	0.19*	0.10			
4 Learning organization	3.96	0.67	0.13	0.09	0.16*		
5 Employee resilience	3.21	0.93	0.11*	0.12*	0.14*	0.43*	
6 Work engagement	3.54	0.72	0.24*	0.17*	0.18*	0.32*	0.51*

Notes: $N = 300$. M, mean; SD, standard deviation.

* $p < 0.01$.

Table 2. Goodness of fit-statistics for measurement models.

Models	χ^2 (df)	χ^2 /df	GFI	CFI	NFI	RMSEA
Model I 3 factors ^a	520.2*** (184)	2.82	0.747	0.878	0.829	0.071
Model II 3 factors ^b	382*** (248)	1.54	0.942	0.931	0.962	0.030
Harman's one factor model ^c	2546 (436)	5.83	0.456	0.382	0.521	0.213

Notes: $N = 300$. χ^2 , chi-square discrepancy; df, degrees of freedom; GFI, goodness of fit index; CFI, comparative fit index; NFI, normed fit index; RMSEA, root mean square error of approximation.

*** $p < 0.001$.; ^aOverall model fit three factors (50 items).

^bOverall model fit three factors (40 items).

^cHarman's single factor model.

bias was not a problem for this study (see Table 2). Thus, the three-factor model showed a better model fit and was retained for further analysis.

Testing of hypotheses

Based on an acceptable fit of the CFA model, the subsequent step was to test the hypothesized model. Structural equation modeling (SEM) was utilized to test the study hypotheses. The three models- direct effect, full mediation and partial mediation structural models were developed and direct effect model was tested against the fully mediated and partially mediated models. The changes in the model fit indices of these three models are shown in Table 3. Values of fit indices indicate that partial mediation model showed a better fit than direct effect and full mediation models (see Table 3).

Furthermore, the mediating effect of employee resilience on the relationship between learning organization and work engagement was evaluated by using Preacher and Hayes mediation analysis (2004). The mediation analysis was conducted using 1000 bootstrap samples and 95 percent confidence interval ranging from 0.05 to 0.17. Since zero is not contained in the 95% confidence interval for the indirect effect, the mediating effect of employee resilience was supported. Table 4 presents the results of mediation analysis.

Results in Table 4 revealed that the existing paths in the model were significant and were in line with the hypotheses. *H1* stated that learning organization would be positively associated with employee resilience. A significant relationship between the two variables ($\beta = 0.38, p < .01$) provides support for *H1*. Also,

Table 3. Goodness of fit-statistics for structural equation model comparisons.

Models	χ^2	df	χ^2 /df	SRMR	GFI	NFI	CFI	RMSEA
Direct effect model ^a	388***	240	1.61	0.05	0.891	0.968	0.885	0.036
Full -mediation model ^b	578***	202	2.86	0.06	0.743	0.872	0.764	0.071
Partial- mediation model ^c	382***	248	1.54	0.04	0.942	0.972	0.912	0.031

Notes: $N = 300$. χ^2 , chi-square discrepancy; df, degrees of freedom; SRMR, standardized root mean square residual; GFI, goodness of fit index; CFI, comparative fit index; NFI, normed fit index; RMSEA, root mean square error of approximation.

*** $p < 0.001$.; ^aLearning organization directly effect work engagement.

^bLearning organization effect work engagement through employee resilience.

^cLearning organization effect work engagement both directly and indirectly.

Table 4. Indirect effect of learning organization on work engagement via employee resilience.

	Employee resilience	Work engagement	Indirect effect
	β^a	β^c	$\beta^{c-c'}$
Employee resilience ^b	–	0.56**	–
Learning organization	0.38**	0.21**	0.16**

Notes: $N = 300$.

** $p < 0.01$; ^aEffect of learning organization on employee resilience.

^bEffect of employee resilience on work engagement.

^cEffect of learning organization on work engagement.

^{c-c'}Standardized indirect effect.

^{*}As per (Preacher & Hayes, 2004) method.

supporting *H2*, employee resilience held a significant positive association with work engagement ($\beta = 0.56$, $p < 0.01$). *H3*, which stated that employee resilience would mediate the relationship between learning organization and work engagement received only partial support, since the effect of learning organization on work engagement ($\beta = 0.21$, $p < .01$) diminishes with the presence of employee resilience but still remained significant ($\beta = 0.16$, $p < .01$). Figure 2 depicts the path coefficients between the study variables.

Discussion

The study findings revealed a significant relationship between learning organization, employee resilience and work engagement in a sample of IT employees in India. In the wake of escalating turbulent environment, it is imperative for organizations to develop their employees' strengths to improve individual and organizational outcomes. Resilience among employees is a vital necessity to function in the 'chaotic practice world' (Blasdel, 2015; Winwood et al., 2013). It has become quintessential for organizations to develop specific interventions for fostering employee resilience and enhance work engagement (Cooke et al., 2016; Hodliffe, 2014; Youssef & Luthans, 2005). Presently, employee resilience has become a key attribute and is receiving increased attention from both organizational behavior scholars and professionals. At a recent American Psychological Association conference (2016), resilience was recognized as a prerequisite for survival in the volatile environment (Davies, 2016). The significance of resilience was also echoed

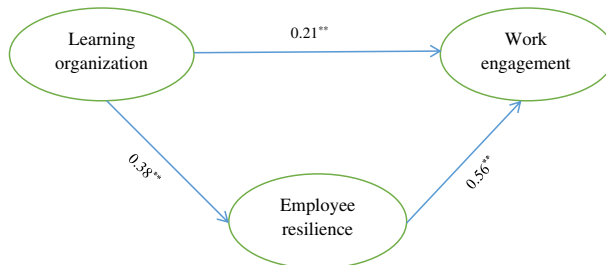


Figure 2. Path coefficients of the model (** $p < 0.01$).

by the 'Right Management's -The flux report (2014)' which found that 60% of HR directors admitted that employee resilience is vital for organizations sustainability (Carrington, 2014).

Thus, corroborating with these facts, the current study posits that firms and human resource (HR) professionals need to invest in developing learning organizations to foster employee resilience and work engagement. The findings of this study, thus, broaden the understanding of the researchers and IT leaders by offering empirical evidence of the relationship between learning organization, employee resilience and work engagement. As revealed by the study results, all the study hypotheses were supported. First, the results show support for *H1* ($\beta = 0.38$, $p < 0.01$) and indicates a significant relationship between learning organization and employee resilience. The results resonates with the research findings of Hodliffe (2014) and Cooke et al. (2016) who reported that organizational practices such as learning culture, empowering leadership, employee participation and corporate communication contribute to employee resilience. Also, the results substantiate the findings of McCray, Palmer and Chmiel (McCray et al., 2016) who reported that UK health and social care (H&SC) organizations should attain the qualities of a learning organisation for building resilience among their employees.

Second, the results show support for *H2* ($\beta = 0.56$, $p < 0.01$) and found a positive relationship between employee resilience and work engagement. The results corroborate with the findings of Waddell (2015) and Sweetman and Luthans (2010) that investigated the link between resilience and work engagement and reported that both positive emotions and hope predict work engagement. Finally, the study revealed that employee resilience partially mediates the relationship between learning organization and work engagement, thus, supporting *H3*. Following Frederickson's broaden-and-build (2001) and conservation of resource theory (Hobfoll, 1989, 2001), this study found strong theoretical and empirical evidence of the role of learning organization in fostering employee resilience and work engagement (Xanthopoulou et al., 2009).

From a research perspective, this study is significant as it extends the current literature on employee resilience and its implication at workplace and explores its mediating role between learning organization and work engagement. Though, resilience has been widely explored in clinical and developmental psychology; the present study brings attention towards its development among employees and thereby adds to the existent literature. The present study advocates that employee resilience must be seen as a capacity that can be developed by investing in learning organization. This finds support from the extant literature which suggests that employee resilience could be developed through caring relationships at workplace (Wilson & Ferch, 2005) and through social support networks and employee participation (Markey, Ravenswood, Webber, & Knudsen, 2013).

A number of studies report that when organizations offer learning culture, employees learn new skills to deal with the ongoing changes in their work (van Breda-Verduijn & Heijboer, 2016; Senge, 1990; Watkins & Marsick, 1996). When

employees are offered continuous opportunities to enhance their skills and learn new techniques, they feel more secure to take calculated risks and try new ideas (Tiwari & Lenka, 2016), and become more flexible and adaptive. The study results provide empirical evidence in favor of the arguments presented by Mills, Fleck, and Kozikowski (2013), who emphasized the utility of resilience as a positive construct to enhance employees' outcomes at workplace. Avey, Wernsing, and Luthans (2008) studied the processes of employees' positivity and found that psychological capital is related to positive emotions which in turn predict positive attitudes like work engagement. This highlights an important aspect that capacity such as resilience generates positive attitudes and behaviors at workplace which in turn can play a vital role in enhancing work engagement.

Implications of the study

The present study offers significant implications to the academic literature both empirically and theoretically. Beyond the theoretical and empirical contributions, this study posits implications for HR managers and practitioners as well. Employee resilience has gained paramount interest among researchers in the recent years. Yet, employee resilience has not been investigated and tested empirically within an organizational context, particularly in Indian IT organizations. By exploring the relationship between learning organization, employee resilience and work engagement, this study fills a crucial paucity existing in the academic literature.

This study offers vital insights to human resource managers and counsellors for building interventions and practices to develop employee resilience. The dynamic marketplace requires employees to adjust successfully to changing policies and structures and operate effectively in the arduous environment, which in turn exert pressure on employees. It is evident by the study reports of Tower's Watson recent Global Workforce study (Towers Watson, 2015), which claimed that 50 per cent Indian employees report excessive pressure at work. IT employees work in an exigent environment where work roles are mentally perplexing and hence results in higher levels of job stress and turnover rates (Bagga, 2013; Messersmith, 2007). According to Asian and Gulf/Middle East Recruitment Company, around one third of workers in the Indian IT sector leave their jobs each year (cited in Bagga, 2013). Thus, with the escalating competition and stressful working environment, the organizations are faced with the question of retaining a workforce which is not only motivated to stretch beyond the formal roles but also adjust effectively to changing environmental demands. Hence, cultivating employee resilience might benefit organizations in the current economic climate when lay-offs, downsizing, and increasing employee workload taxes employees' morale and ability. Resilience, thus, might serve to construct a pathway for developing engaged employees, wherein the employees can not only employ their resources to confront new challenges but also find new ways to handle the demanding situations at workplace. Luthans, Vogelgesant and Lester (2006) also echoed the valuable

role of employee resilience and advocated that HR professionals must recognize and design practices for fostering employees' resilience.

Over the years, HRD professionals have mainly focused on augmenting human capital knowledge, skills, and proficiencies to achieve competitive advantage. But in the current times of 'flat-world globalization' and mounting competition, these strategies are no longer sufficient. In the current era of incessant automation, HRD must turn their attention towards developing the psychological strengths of human resources. Organizations need to commit to their employees by helping them develop skills and coping mechanisms to improve their employability and marketability. Specifically, firms can help and support their employees in becoming resilient by inculcating learning organization practices and thus can become better prepared to sustain in the competitive market.

From a societal perspective, focus on employee resilience is significant for researchers and practitioners, with lessons for organizations globally. The deepened understanding of implications of resilience could provide practitioners with new ideas for developing interventions for effective adaptation. Current trends demonstrate that the environmental forces driving change within organizations are not weakening and are affecting both employees and employers (Girdano, Dusek, & Everly, 2009). This means that organizations will continue to feel the pressure to adapt their means of competing in the marketplace. Drawing on the current findings, management should focus less on reacting to the adverse changes and instead focus more on developing their employees' resilience. The study recommends that human resource (HR) professionals and departments need to invest in building learning organization to develop employee resilience, in general, to keep their employees engaged. Though not yet a noticeable trend, developing employee resilience may be a contender to replace stress management.

From a theoretical contribution perspective, the study contributes to the body of knowledge by drawing on the Frederickson's broaden-and-build theory and conservation of resource theory to explain the underlying mechanism of how learning organization contributes to employee resilience and work engagement. Even though resilience has been theoretically proposed to be an important outcome of Frederickson's broaden-and-build theory, literature lacks empirical evidence to support this assertion. Employing the Frederickson's broaden-and-build theory, this study explicates the role of learning organization in fostering employee resilience, while also examining the mediating influence of employee resilience between learning organization and work engagement. In other words, the study clarifies the role of employee resilience by examining it as a potential explanatory mechanism for the relationship between learning organization and work engagement. This study thus offers significant implications for HRD practitioners for fabricating their arsenal for building a highly resilient and engaged workforce.

Limitations of the study

This study has certain limitations. As the study sample comprised of only IT organizations located in the NCR region of Delhi in India, future research are required for generalizing the study results to other business sectors functioning in different parts of the country. A second limitation is that this study did not take the demographic differences (age, gender, educational levels, managerial hierarchy, and tenure) into account. Future research should incorporate demographic differences of work unit to better understand the influence of contextual factors on the personal resources. The study results must be tested for differences at hierarchical levels and educational levels of employees. Thirdly, the study used a cross sectional survey method and hence future studies must be conducted using longitudinal surveys for significant insights. The future studies might also focus on conducting comparative study including private and public sector firms from other locations and industries in other countries for generalizing the study results.

Disclosure statement

No potential conflict of interest was reported by the authors.

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