

Mubarak, Fozia; Noor, Ayesha

Article

Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Mubarak, Fozia; Noor, Ayesha (2018) : Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 5,
<https://doi.org/10.1080/23311975.2018.1429348>

This Version is available at:

<https://hdl.handle.net/10419/206046>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>



Received: 05 November 2017
Accepted: 11 January 2018
First Published: 23 January 2018

*Corresponding author: Ayesha Noor,
Department of Management sciences,
Shaheed Zulfiqar Ali Bhutto Institute of
Science and Technology, Islamabad,
Pakistan
E-mail: ayeshanoor.2012@gmail.com

Reviewing editor:
Sandy Nunn, Foreign Affairs Council,
USA:

Additional information is available at
the end of the article

MANAGEMENT | RESEARCH ARTICLE

Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment

Fozia Mubarak¹ and Ayesha Noor^{1*}

Abstract: The purpose of this research is to explore the relationship that exist between authentic leadership and employee creativity in project-based organizations. The mediating effects of work engagement and psychological empowerment on the relationship of authentic leadership and employee creativity were also focused in this research. Proficient organizations ensure presence of systematic practical approaches that can benefit employees in increasing their engagement levels and making them feel more empowered. The data were collected through convenience sampling from 246 respondents of different Project-based NGO's of Islamabad and Rawalpindi. The findings suggest that employee creativity is significantly associated with authentic leadership, work engagement, and psychological empowerment. In addition, it was also revealed that extra engaged employees at work were more creative and sense of empowerment also mediates the relationship between authentic leadership and employee creativity. This research contributes to the current literature that authentic leadership relates to employee creativity, through mediating effects of work engagement and psychological empowerment.

ABOUT THE AUTHORS

Fozia Mubarak is doing MS in project management from Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology (SZABIST), Islamabad, Pakistan. Her main area of interest includes human resource management, risk management, quality management, and project management.

Dr Ayesha Noor is a PhD from Muhammad Ali Jinnah University Pakistan. She is an assistant professor at Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology (SZABIST), Islamabad, Pakistan. Her area of research is employee attitudes at workplace, stigma, collectivist culture, leadership, and organizational justice.

PUBLIC INTEREST STATEMENT

Every individual capability and creativity is different and unique. Some may be more creative and some may be less. But a good leader or supervisor can influence the sub-ordinate or employee to work creatively. This particular article explains that how authenticity of a leader can play an important role in increasing employee creativity specifically in project-based organizations where meeting deadlines is a huge challenge. A sample of 246 employees from project-based organization was gathered, which was used to demonstrate the relationship that does exist between authentic leadership and employee creativity. The results showed positive and significant total effect of authentic leadership on employee creativity. Additionally, the impact of work engagement and psychological empowerment on this relationship was explored. Work engagement was mediating between authentic leadership and employee creativity. While psychological empowerment acted as a partial mediator. The results may help project-based organizations to take initiatives to increase authenticity in leaders and creativity in employees.

Subjects: Leadership; Administration and Management; Management & Organization

Keywords: authentic leadership; psychological empowerment; work engagement; employee creativity

1. Introduction

For gaining competitive advantage in today's dynamic work environment creativity is a treasured source. Organizations have to advance creativity with an aim to endure and flourish along with ever-advancing technology, extreme internal and global competitive pressures, vague and very much stormy economic environment. Organizations also need to discover creative approaches to accomplish their own requirements. Organizations need leaders who can provoke positive behavior in their employees by motivating them. These behaviors are not necessarily part of their job requirement officially but they play a vital role in giving productive outcomes in organizations (Katz, 1964).

In today's world organizations are much more focused on helping employees/workers to enhance job performance rather than controlling and dominating them. According to Brungardt (1997) a constant research concern in the field of human resource expansion, management and managerial performance is Leadership. Leadership is one of the major relative factors that impacts creativity and innovation. Leaders play a decisive part in empowering and sustaining the development and nurturing of creativity and innovation. The development of a warm relationship between leader and employee is very much important to promote a healthy organizational environment. Among different styles of leadership, authentic leadership has gained much attention owing to paradigm change due to some incidents in different organizations. Leaders help followers find association and meaning at their workplace, thereby making an essential difference to organizations and in this context Authentic leadership has drawn significant attention (Cartwright & Holmes, 2006; George, 2003). For a better understanding of the association between advanced leadership styles, for instance authentic leadership and creativity, there is a great need of further investigation. Various researchers and practitioners have explored the effects of authentic leadership on employee behaviors and conducts to improve organizational performance.

By making creativity a pre-requisite condition for any job, employee creativity can be reinforced by leaders. Creativity can also be improved by showing positive response and rewards to employees when they accomplish creative outcomes (De Stobbeleir & Ashford, 2011). Motivated employees exhibit elevated levels of creativity (Amabile, 1988; Amabile, Conti, Coon, Lazenby, & Herron, 1996; Zhou & Ren, 2011).

In contrast some studies in the literature validate that employee creativity may decline under leadership and supervision. Leader's close observing attitude and narrow administration turn down the employee's creativity (Zhou & Ren, 2011). The contradictory outcomes motivated the research to figure out the effects of leadership (authentic leadership) on employee's creativity. In literature, different mediating variables such as hope, positive effect, and psychological capital have been tested between the association of authentic leadership and employee creativity. This research is one of the pioneer studies to explore the mediating effect of work engagement and psychological empowerment on the relationship of authentic leadership and employee creativity.

Semedo, Coelho and Ribeiro (2017) explored the relationship between authentic leadership and creativity, with the mediating role of happiness. Further they recommended that more investigations should be carried out to recognize additional consequences of the presence of authentic leaders in organizations plus suggested other variables that mediate or moderate the relationship with creativity.

Malik, Dhar, and Handa (2016) carried out a research on authentic leadership and its impact on creativity of nursing staff. They suggested that more experimental studies should be carried out in other industrial sectors to generalize these findings. As their work was based on one mediator only,

they gave another recommendation of using other mediators to fully comprehend the association between authentic leadership and employee creativity and the factors that impact this relationship.

A research was conducted on relationship of authentic leadership and creativity by Rego, Sousa, Marques, and Cunha (2012) they suggested researchers to explore the variables they used to get a richer understanding of how these variables communicate empirically and interrelate with other variables. They endorsed using new mediating variables, such as psychological empowerment and work engagement.

Al Sahi AL Zaabi, Ahmad, and Hossan (2016) studied the association among authentic leadership and work engagement in Petroleum Company of UAE. They suggested the verification of relationship between authentic leadership and work engagement in another sector in UAE or elsewhere in another country.

2. Literature review

2.1. Authentic leadership and employee creativity

One of the developing pillars of the field of the leadership is authentic leadership since the last decade. Authentic leaders are required in organizations for helping employees find significance and association at work so that they can deal with the novel, chaotic, and vigorously altering work surroundings via making a vital difference in organizations. Authenticity originates from Greek philosophy and has an imperative place in theoretical writings and refers to “thine own self be true” (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Harter, 2002).

According to Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) followers think about leaders authenticity according to how much they symbolize these four unique components that characterize authentic leadership; an internalized moral perspective which refers to a self-regulation system operated by internal moral values and principles which they strongly believe and follow; balanced processing which refers to making a decision impartially after carefully scrutinizing relevant data and information; self-awareness which refers to the understanding of a leader about his or her own strengths and weaknesses and their effect on others; and relational transparency which refers to the level to which a leader is geared up to share opinions and information among followers and encourages followers to do alike.

Creativity involves production of fresh and valuable concepts relating to goods, services, procedures, and processes (Madjar, Oldham, & Pratt, 2002; Zhou, Christina, & Shalley, 2003). Creativity look for unique ways of doing work and novel ideas associated with developing new opportunities (Amabile, 1983). In the place of work, the process in which new ideas are generated and original, appreciated, and valuable solutions are given for a particular problem is known as creativity (Amabile, 1988; Oldham & Cummings, 1996). In almost any employment at various stages; creativity is valued across many professions and industries. Creativity delivers rare and distinctive assistance to organizations. Creativity results in prosperous companies, satisfied employees, financial affluence, and social growth. According to definition, creativity has two fundamental basics; novelty and usefulness which explains creativity as creation of original and constructive ideas regarding goods, services, processes, management practices, business models, and competitive strategies (Zhou & Ren, 2011). The objective of creative performance is not merely production of enormous number of concepts, but to generate new products and services, to adapt market-place opportunities into business for organizations and to make organizations more operational through producing such ideas that can solve problems that are faced.

Leadership is a feature that empowers employees to promote creativity and innovation with the proper feedback (Muceldili, Turan, & Erbil, 2013). Concept of psychological security (Edmondson, 1999) and inherent motivation (Ryan & Deci, 2000) assist to endorse our hypothesis which affirm

authentic leadership is related to employee's creativeness which refers that authentic leaders encourage employee's insights of mental security and their built-in motivation, which consequently make them extra original. Michie and Gooty (2005) predicted that authentic leaders also raise authenticity amid their dependents because they sense less prone to the changes that employees' honest and original ideas may infer and are more prone to welcome their creative ideas. The quest of new opportunities results in disagreement of employees with leader (Cheung & Wong, 2011). Therefore, to accomplish a non-routine role of creativity, employees require reassuring behavior of leader (Amabile & Gyskiewicz, 1987). Creativity is nurtured by Employees' intrinsic motivation as naturally stimulated employees are (1) additionally inquisitive and slanted toward learning, (2) they are flexible in their intellectual thinking, (3) they are risks takers, and (4) when they encounter challenges, hurdles, and opportunities they seem to be more determined (Amabile, 1997; Farmer & Graen, 1999; Oldham & Cummings, 1996; Zhou, 2003; Zhou & Ren, 2012). Authentic leaders enhance the positive sentiments of employees by constructing supportive, positive, reasonable, and transparent connections with them (Peterson, Walumbwa, Avolio, & Hannah, 2012) which as a result escalates their creativity. A positive association between ethical and moral perspective and employee creativity has also been evident from previous studies (Bierly, Kolodinsky, & Charette, 2009; Valentine, Godkin, Fleischman, & Kidwell, 2011). Considering the literature (Ilies, Morgeson, & Nahrgang, 2005) proposes that authentic leaders by supporting the autonomy of their employees make them fundamentally more motivated. Therefore, our first hypothesis pursues that:

H1: Authentic Leadership has significant positive effect on employee Creativity.

2.2. Authentic leadership, work engagement, and psychological empowerment

Kahn (1990) explained employee engagement as the demonstration of people's entire personalities which include physical, intellectual, and emotional roles in their work part. He conceptualized that how employee perceives the work contexts surrounding him or her influences the level of the person's favorable engagement with it. The idea of work engagement can be defined as an optimistic, satisfying, job-related shape of mind that is distinguished by strength, devotion, and absorption (Schaufeli, Salanova, González-romá, & Bakker, 2002). To be exact, work engagement is considered to be representing how employees recognize their work (Bakker, Schaufeli, Leiter, & Taris, 2008) as a deliberate and thoughtful pursuit of work (dedication or intellectual engagement); as captivating and exciting (emotional engagement); and as stimulating and energetic that they are enthusiastic to devote themselves with passion (vigor or behavioral engagement). Work engagement has many positive outcomes that's why it is a crucial aspect for organizations. It has a substantial effect on employees along with organizations (Saks, 2006). Work engagement leads to better job performance and more positive work outcomes by attaching employees physically and emotionally to their organization (Kumar & Pansari, 2015; Menguc, Auh, Fisher, & Haddad, 2013; Schaufeli & Bakker, 2004).

Researchers and practitioners have increasingly paying attention to empowerment because it offers the potential to positively influence outcomes that not only advantages individuals but organizations as well (Liden, Wayne, & Sparrowe, 2000). The concept of empowerment has been well thought-out as a powerful weapon to elevate organizational efficiency. Giving people the authority to make decisions has been perceived as empowerment (Randolph, 1995). From previous theories of empowerment (e.g., Conger & Kanungo, 1988; Thomas & Velthouse, 1990) the idea of empowerment is digged out by Spreitzer (1995) and he explained psychological empowerment as a kind of intrinsic motivation which is established from four kinds of perceptions: meaning, competence, self-determination, and impact. It is argued that these four dimensions are essential to constitute the whole construct of psychological empowerment; and the overall degree of observed empowerment declines as a result of absence of a single out of these four dimensions. The conceptualizations of the dimensions are:

- (1) Meaning: Perceived worth of a work or task.
- (2) Competence: The magnitude to which an individual have faith in that he or she has the essential abilities to accomplish the organizational activities.
- (3) Self-determination: A choice of introducing and regulating activities performed by self.
- (4) Impact: Perceiving self has a kind of influence to one's immediate work atmosphere.

Therefore, psychologically empowered employee feels internally motivated because he recognizes his work worth something, he know that he is capable of doing that work, he has a kind of control to one's immediate work place and he has choice of introducing and regulating activities performed by self. All these magnitudes give the employee a boost and help him to feel empowered.

A close association among authentic leadership and engagement is effortlessly predictable. It has been reasoned that followers who work under authentic leaders are more probable to be engaged, as the leaders have a tendency to motivate their followers' value and conduct so that their followers are capable to be obvious, reasonable, ethical, and decent in their work role (Giallonardo, Wong, & Iwasiw, 2010). By creating a shared special sense of "us" leaders are capable to encourage work engagement and avoid stress among group members. Findings recommend that authentic leadership means being capable of facilitating the development of a distinctive sense of "us" shared among the leader and the group members (Steffens, Haslam, Kerschreiter, Schuh, & Dick, 2014).

Therefore, it can be hypothesized that:

H2: Authentic Leadership has significant positive effect on Work Engagement.

A study revealed that a close connection is there amid authentic leadership and psychological empowerment (Avolio, Gardner, Walumbwa, Luthans & May, 2004). Employees are treated with admiration rather than treating them as a resource to complete task by authentic leaders. Consequently, a stronger sense of connotation at work is experienced by employees, which is one of the leading aspects in psychological empowerment (Bandura, 1986; May, Gilson, & Harter, 2004). Besides this, one more vital factor in the employee's psychological empowerment is feeling autonomous in decision-making; employees of authentic leaders identify themselves as self-sufficient in making their own decisions (Conger & Kanungo, 2000; Meyerson & Kline, 2008). Self-awareness and self-regulated behaviors of both leaders and followers are positively affected by authentic leadership. Authentic leaders stimulate motivation for individual growth and self-development of their employees (Ilies et al., 2005). The employees feel more comfortable under such supervision where they can get motivation and inspiration. A leader who is genuinely authentic will surely try to make his employee feel empowered.

We, therefore, hypothesize that:

H3: Authentic Leadership has significant positive effect on Psychological Empowerment.

2.3. Work engagement, psychological empowerment, and employee creativity

Bedarkar and Pandita (2014) studied the drivers of employee engagement impacting employee performance and they establish that the most important resource of an organization is its employees, they must be given good space and time to create an ideal combination of work and fun at their place of work, this is the only way to set sense of engagement in the employees. Therefore, organizations should take steps to fulfill employee's expectations, thus, creating an impact on the performance of the employee which will affect the performance of the organization ultimately. A study was done on work engagement and performance in which 105 school principals and 232 teachers were involved (Bakker, Gierveld, & Van Rijswijk, 2006). A noteworthy and positive relationship between work engagement scores and performance and leadership was revealed in their research. Additionally, engagement was strongly associated to creativity; the participants with higher levels of

work engagement were capable to come up with diverse ways to deal with difficulties and problems in their work environment. Fredrickson (2001) in his broaden-and-build theory of positive emotions explained that through widening the collection of opinions and actions that approach any mind, certain constructive emotions which may include happiness, curiosity, and contentment, all contribute to the competence to widen people's temporary thought – action repertoires and construct their personal resources that may range from materialistic to intellectual resources and also include social and psychological resources. For example, joy broadens resources by developing the urge to play and be more original. Work engagement is an important feature which emphasize on the insight of an employee toward his work. The additional meaning he gives to his work, extra engaged he feels at his job. As a result, it will increase his creativity and he will be able to give more dynamic and original results in his workplace.

Work engagement results in employee productivity as an outcome with many other productive outcomes in this experience (Robertson-Smith & Markwick, 2009).

Therefore, it can be hypothesized that:

H4: Work Engagement has significant positive effect on employee Creativity.

Employees utilize extra determination to view a problem from various perspectives, when they find out that their work needs are substantial and individually significant (Shalley & Gilson, 2004). On top of it, when employees believe that they have the ability and when they are given the requisite resources to carry out employment productively, they possess a certain range of autonomy more than job setup. For that reason, they can easily figure out great outcomes as a result of their behavior and performance. They are more likely to concentrate on idea production and solution-oriented results in an extra attentive and persistent way (Deci & Ryan, 1991; Spreitzer, 1995; Zhang & Bartol, 2010). As a result, employees who feel more psychologically empowered would be inclined to disclose extra creativity in their work. Furthermore, the relation between psychological empowerment and creativity is backed up by preceding research (Seibert, Wang, & Courtright, 2011; Zhang & Bartol, 2010). Empowered individuals observe more efficiency in carrying out tasks as they are more innovative and creative, (Spreitzer, 1995), and exhibit more extra-role performance (Morrison & Phelps, 1999). We therefore, hypothesize that:

H5: Psychological Empowerment has significant positive effect on employee creativity.

2.4. Mediating role of work engagement and psychological empowerment

The mediating effect of work engagement on the relationship between authentic leadership and employee creativity has never been studied in literature. But work engagement has been used as mediator in many studies between various variables. Bakker and Bal (2010) establish that work engagement fully mediated the association among autonomy and job-performance. In addition, Salanova and Schaufeli (2008) found that relationship between job resources and optimistic behavior at work is fully mediated by work engagement. Vinarski-Peretz and Carmeli's (2011) study confirmed that encouraging mental situation which includes work engagement plays a vital role in enhancing innovative performance. Binnewies, Ohly, and Sonnentag(2007) reported that individual inventiveness is absolutely related to idea creativity.

Therefore, seventh hypothesis that is to be tested is as follows:

H6: Work Engagement mediates the relationship between the Authentic Leadership and employee creativity.

In addition to the studies that showed a positive relationship between AL and PE (Zhu, May, & Avolio, 2004), it is expected that PE will increase when perception of AL among employees increases. When a leader gives respect, trust, and identification to his employee, it guide employees to experience

better mental security which as a result help them to feel free to take risks, present conflicting thoughts, and put forward unconventional ideas without any hesitation (Avolio, Gardner, Walumbwa, Luthans, & May, 2004; Edmondson, 1999; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010). Therefore, pushing employees to be extra creative and original in their routine tasks helps them to solve problems and avail opportunities.

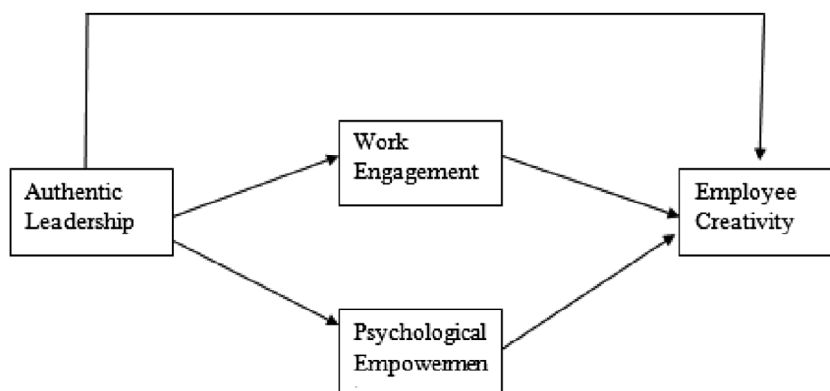
It is important to note that although separate independent studies have been done to show that there are significant relationships between the variables mentioned, there has been no research that tests the goodness of fit of all these variables in a single study.

Therefore, sixth hypothesis that is to be tested is as follows:

H7: Psychological empowerment mediates the relationship between authentic leadership and employee creativity.

2.5. Proposed theoretical/conceptual framework

The following model was tested in order to predict the impact of Authentic Leadership on Employee's Creativity in Pakistani project-based organizations.



2.6. Proposed research methodology

The data were collected from 300 employees working in project-based NGOs' of Islamabad and Rawalpindi. Out of which data of 246 respondent's data were used for further analysis. P-P graphs and the values of skewness and kurtosis show that data are normally distributed.

2.7. Sources of instrumentation

This research was conducted using a five-point Likert scale, where 1 stand for Strongly Disagree, 2 symbolize Disagree, 3 correspond to Neutral, 4 signify Agree, and 5 embody Strongly Agree option for every variable item, except for demographics where nominal scale was used. For Authentic leadership 14-items scale was used which was developed by Schaufeli and Bakker (2003). Some of the items included in this instrument were "My leader clearly states what he/she means" and "My leader shows consistency between his/her beliefs and actions". Cronbach Alpha value was 0.87.

For Work Engagement 17-items scale was used which was developed by Schaufeli and Bakker (2003). Some of the items incorporated in this instrument were "At my work, I feel bursting with energy". And "time flies when I am working". Cronbach Alpha value was 0.89.

Twelve-items Psychological empowerment scale by Spreitzer (1995) was used to measure psychological empowerment. Some of the items incorporated in this instrument were "The work I do is very important to me" and "I have mastered the skills necessary for my job". Cronbach Alpha value was 0.81.

For the measurement of Creativity, Zhou and George’s (2001) 13-item scale were used. Sample items include “come up with creative solutions to problems” and “a good source of creative ideas”. Cronbach Alpha value was 0.85.

The cronbach value of all instruments for this present study was greater than 0.70 which according to Nunnally and Bernstein (1994) is acceptable confirming the reliability of the instruments. The demographic variables Gender and Education were controlled.

For mediation analysis Hayes and Scharkow (2013) process was used as it gives more precise results compared to baron and Kenny approach.

3. Results

3.1. Correlation

Comprehensive table is appended below demonstrating the associations, Means, Standard deviations, and correlations between all variables including independent variable (IV) i.e. authentic leadership, dependent variable (DV) i.e. employee creativity and mediating variables (M) i.e. work engagement and psychological empowerment.

The mean value of authentic leadership is 3.46 which show that over all employees have positive attitudes toward their leader. For work engagement mean value is 3.60 which depicts that employees are more toward positive response. Psychological empowerment has mean value of 3.71, which demonstrates that employees feel more empowered. And for employee creativity the value of mean is 3.89, which is highest among all the variables. This value gives an idea about how much employee think of themselves as creative person which is more toward positive response.

Correlation demonstrates how each variable is associated with other variables.

The results show that authentic Leadership has significant positive strong correlation with Employee creativity (0.420**). Thus, H1 is supported. The correlation Table 1 show that authentic Leadership has significant positive strong correlation with work engagement (0.679**). Thus, H2 is also backed up. Authentic Leadership is also showing significant positive strong correlation with psychological empowerment (0.434**). As a result, H3 is supported. Work engagement has significant positive strong correlation with employee creativity (0.542**). Consequently, H4 is supported. Psychological empowerment has significant positive strong correlation with employee creativity (0.758**). Therefore, H5 is supported. So, all the direct hypotheses of our model are being supported by the correlation test.

Table 1. Correlation showing how each variable is associated with other variables

	Mean	SD	Gender	Edu	AL	WE	PE	EC
Gender	1.36	0.481	1					
Edu	2.00	0.885	0.134*	1				
AL	3.46	0.775	-0.205**	0.059	1			
WE	3.60	0.733	-0.244**	0.112	0.679**	1		
PE	3.71	0.759	-0.069	-0.039	0.434**	0.695**	1	
EC	3.89	0.687	0.022	-0.059	0.420**	0.542**	0.758**	1

*Correlation is significant at 0.05 level (2-tailed).

**Correlation is significant at 0.01 level (2-tailed).

Table 2. Mediated regression of work engagement between AL and EC showing all the paths

	Coeff	SE	t	p	R ²	Adj R ²	F
AL to WE (a paths)	0.6129	0.0450	13.63	0.0000			
Direct effect of WE on EC (b paths)	0.5016	0.0676	7.41	0.0000			
Total effect of AL on EC (c path)	0.4005	0.0523	7.65	0.0000			
Direct effect of AL on EC (c' path)	0.0931	0.0629	1.48	0.1400			
					0.3476	0.3368	32.10

Notes: AL = Authentic leadership; WE = Work engagement; EC = Employee creativity.

a path represents the relationship of AL with work engagement which is positive and significant.

b path shows relationship of Work engagement with Employee creativity which is also positive and significant.

c path shows the relation between AL and employee creativity without mediators and it is also positive and significant.

c' path shows the mediating effect of work engagement between AL and employee creativity. The insignificant value of coefficient shows that mediation exists.

3.2. Regression

Table 2 (mediation I) shows positive significant relation between authentic leadership and work engagement (coeff = 0.6129, $p = 0.0000$), Work engagement is positively and significantly related to employee creativity (coeff = 0.5016, $p = 0.0000$). It also shows positive and significant total effect of authentic leadership on employee creativity (without mediator) (coeff = 0.4005, $p = 0.0000$). Therefore, H1, H2, and H3 are accepted.

In support to confirm the mediating role of work engagement mediation was tested through preacher and Hayes, the insignificant value of coefficient in direct effect of authentic leadership on employee creativity path shows that mediation exists and work engagement is mediating the relationship of authentic leadership and employee creativity. Consequently, H6 is accepted.

R² is measure of goodness of fit and it is also known as “co-efficient of determination”. This term tells us about how much regression line is robust, empowered, and fit in the model. R² captures the fluctuations in dependent variable due to the fluctuations in independent variables. The R-square value in mediation I is 0.3476, which depicts that 34.76% fluctuations in DV (i.e. authentic leadership) are captured due to fluctuation in IV.

Table 3 (mediation II) shows positive significant relation between authentic leadership and psychological empowerment (coeff = 0.4352, $p = 0.0000$), psychological empowerment is positively and significantly related to employee creativity (coeff = 0.6349, $p = 0.0000$). It also shows positive and significant total effect of authentic leadership on employee creativity (without mediator) (coeff = 0.4005, $p = 0.0000$). Therefore, H1, H4, and H5 are accepted.

Table 3. Mediated regression of psychological empowerment between AL and EC showing all the paths

	Coeff	SE	t	p	R ²	Adj R ²	F
AL to PE (a paths)	0.4352	0.0580	7.50	0.0000			
Direct effect of PE on EC (b paths)	0.6349	0.0412	15.40	0.0000			
Total effect of AL on EC (c path)	0.4005	0.0523	7.65	0.0000			
Direct effect of AL on EC (c' path)	0.1242	0.0413	3.01	0.0029			
					0.5962	0.5895	88.95

Notes: AL = Authentic leadership; PE = Psychological empowerment; EC = Employee creativity.

a path represents the relationship of AL with psychological empowerment which is positive and significant.

b path shows relationship of psychological empowerment with Employee creativity which is also positive and significant.

c path shows the relation between AL and employee creativity without mediators and it is also positive and significant.

c' path shows the mediating effect of psychological empowerment between AL and employee creativity. The significant value of coefficient shows that mediation does not exist.

Psychological empowerment is hypothesized to mediate the relationship between authentic leadership and employee creativity in our model. To confirm the mediating role of psychological empowerment mediation was tested through Preacher and Hayes, the significant value of coefficient in direct effect of authentic leadership on employee creativity path shows that partial mediation exists and psychological empowerment is partially mediating the relationship between authentic leadership and psychological empowerment. Consequently, H7 is partially accepted.

R-square captures the fluctuations in dependent variable due to the fluctuations in independent variables. The R-square value in mediation II is 0.5962, which depicts that 59.62% fluctuations in DV (i.e. authentic leadership) are captured due to fluctuation in IV.

4. Discussion

The findings of this research suggest noteworthy hypothetical contributions to the literature and organizational implications. It is the first study which empirically tested and validated the mediating effect of work engagement and psychological empowerment on the relationship of authentic leadership and employee creativity. Recent studies involving mediating variables between authentic leadership and employee creativity only included hope, positive effect, and psychological capital. The significant coefficient values between the variables allow us to predict that an association exists among them. The results show that authentic leadership is a strong predictor of employee creativity. The same results have been suggested in literature by Rego et al. (2012). Employees are more creative under authentic leaders because they feel much more engaged and empowered under their supervision. Authentic leadership has also shown positive strong correlation with work engagement, which indicates that an authentic leader is proficient enough to keep his employees more engaged and involved in their work by creating a special association with them. Giallonardo et al. (2010) also explained this relation that employees who work under leaders who show authenticity are likely to be more engaged at their work.

The hypothesis which stated that Work engagement has positive significant relation with employee creativity is also accepted in results which confirm that more engaged employees will show more creativity. When a person is more engaged in his/her work, it is naturally expected that more productive results can be achieved. Bakker et al. (2006) did a research in which they established a fact that engagement has a strong association with creativity because the respondents who possess high level of work engagement in their research showed a broad range of ways to cope with on job difficulties and problems. Work engagement is also mediating between authentic leadership and employee creativity which implies that more engaged employees who recognize their work as important part of their lives are more likely to be more creative under authentic leaders.

In our findings, authentic leadership has found to be strongly correlated with psychological empowerment which reveals the impact of an authentic leader on sense of empowerment in employees. Zue, May, and Avolio (2004) found out that there is an essential relationship among authentic leadership and empowerment. Thus, our results are confirming their findings. When a leader is authentic, he gives his employees a sense of respect and creates an extraordinary association with them in workplace. This as a result, makes the employee feel more motivated and empowered. Psychologically empowered employee feels internally motivated because he recognizes his work worth something, he knows that he is capable of doing that work, he has a kind of control to one's immediate work place, and he has choice of introducing and regulating activities performed by self. All these magnitudes give the employee a boost and help him to feel empowered. Therefore, the employee can generate new ideas on regular basis and can be more creative in carrying out different tasks.

The results of the research shows psychological empowerment has positive significant relation with employee creativity which suggests that the employees who feel more empowered in their work place are going to be more creative. They will feel free to make their own decisions and will not feel hesitant to try new ideas and solutions for different problems they face in their organization.

Moreover, there are many researches in literature which hold up this link between creativity and empowerment (Seibert et al., 2011; Zhang & Bartol, 2010). Psychological empowerment is also playing role of partial mediator among authentic leadership and employee creativity. This gives an impression that employees who feel more empowered will show more creativity under the supervision of authentic leader.

5. Theoretical implications

Rego et al. (2012) and Malik et al. (2016) have suggested that more empirical research is necessary to recognize the system through which authentic leadership influences employee creativity. This is the first research which empirically tested and validated the mediating effect of work engagement and psychological empowerment on the relationship of authentic leadership and employee creativity. The results of this research supported all the hypotheses which states that authentic leadership has positive significant effect on employee creativity through work engagement and psychological empowerment. The results are considerable because they support the literature and it suggests that an authentic leader can provide an environment and working conditions that may help his employees to improve their performance especially in terms of creativity.

6. Managerial implications

The results from this research can be helpful for managers and organizations to recognize how to enhance employee's creativity through authentic leadership as our findings reveal that employees' creative behavior is linked to team leaders' authenticity. A leader must know himself in terms of his own strengths and weaknesses in order to understand that how it effects his followers and subordinates. It also suggests that organizations which aspire to increase employee creativity should focus on selecting leaders with authentic features and put into practice appropriate training activities that aim to increase leader's authenticity. Organizations can support managers in achieving more authentic style so that they can affect the employees' creativity. Different methods which may include multisource feedback, the use of role playing, and arranging leaderless group discussions can increase leaders self-awareness and it will help them to take a deep insight into their employees point of view (Hsiung, 2012; Ilies et al., 2005), and it will eventually make them extra authentic in their leadership style.

Managers should pay attention to promote the work engagement and psychological empowerment of their employees through different HR practices. Work engagement and psychological empowerment should be measured through different surveys often to scrutinize their level of engagement and empowerment.

7. Conclusion

Quite a few contributions to the literature were achieved in this research. First of all we have built and tested a model which includes the impact of authentic leadership on employee creativity in the presence of work engagement and psychological empowerment as mediators. Leaders and managers should consider these findings to achieve preferred results and optimistic attitude from their employees. Different training programs need to be developed to enhance authenticity in leaders and managers in order to get maximum creativity from the employees. Furthermore, the results revealed that work engagement is a significant mediator in the association between authentic leadership and employee creativity. Authentic leaders can enhance the level of creativity in employees by influencing their work engagement levels. As it was evident from results, that employees who work under authentic leaders had high levels of work engagement. Therefore, to elevate the work engagement level of employee different HR activities should be considered and applied in organizations. Psychological empowerment was partially mediating the relation between authentic leadership and employee creativity, so it can be inferred that a more psychologically empowered employee will be more creative as compared to less empowered employee. Hence, different steps should be taken in different project-based organizations to make their employees more empowered.

8. Limitations and future directions

There are certain limitations of this work. Firstly, this research is based on convenience sampling technique in which sample is taken which is handy and easily available. In this method, may be some groups are not included in sample. To represent the targeted population accurately, future studies should think about restating the same model with random sampling technique. Secondly, this research covers employees from development sector only which concerns the generalizability of our findings. Future studies could measure the generalizability of this model by taking samples from employees in other cultures and sectors. The same research should be carried out in some other sectors involved in projects. The same model can also be studied in countries other than Pakistan to endorse these results.

Due to shortage of resources i.e. time, the unit of analysis for this research was taken individual which otherwise could have been dyads. Future research should pay attention on some other unit of analysis i.e. Dyads, where the authentic leadership part of the questionnaire will be filled by the employee and employee creativity part will be filled by the leader.

Data were collected just once during the research; on the other hand, future studies should collect the data at different points in time (longitudinal studies) or by means of a multiple-source method. The absence of a moderating variable in the model can also be measured as a limitation.

Psychological empowerment is partially mediating between authentic leadership and employee creativity in present research, thus it should be taken as moderator in future to scrutinize if this variable has any moderating effects on the relationship of IV and DV.

Funding

The authors received no direct funding for this research.

Author details

Fozia Mubarak¹

E-mail: aizof_007@live.co.uk

ORCID ID: <http://orcid.org/0000-0003-2984-8438>

Ayesha Noor¹

E-mail: ayeshanoor.2012@gmail.com

¹ Department of Management Sciences, Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Islamabad, Pakistan.

Citation information

Cite this article as: Effect of authentic leadership on employee creativity in project-based organizations with the mediating roles of work engagement and psychological empowerment, Fozia Mubarak & Ayesha Noor, *Cogent Business & Management* (2018), 5: 1429348.

References

- Al Sahi AL Zaabi, M. S. A., Ahmad, K. Z., & Hossan, C. (2016). Authentic leadership, work engagement and organizational citizenship behaviors in petroleum company. *International Journal of Productivity and Performance Management*, 65(6), 811–830. <https://doi.org/10.1108/IJPPM-01-2016-0023>
- Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), 357. <https://doi.org/10.1037/0022-3514.45.2.357>
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 10, pp. 123–167). Greenwich, CT: JAI Press.
- Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review*, 40(1), 39–58. <https://doi.org/10.2307/41165921>
- Amabile, T., & Gryskiewicz, S. S. (1987). Creativity in the R&D laboratory. *Center for Creative Leadership*.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39, 1154–1184. <https://doi.org/10.2307/256995>
- Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly*, 15, 801–823. <https://doi.org/10.1016/j.leaqua.2004.09.003>
- Bakker, A. B., & Bal, M. P. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, 189–206. <https://doi.org/10.1348/096317909X402596>
- Bakker, A. B., Gierveld, J. H., & Van Rijswijk, K. (2006). Succesfactoren bij vrouwelijke schoolleiders in het primaironderwijs: Een onderzoek naar burnout, bevlogenheidsprestaties (Success factors among female school principals in primary teaching: A Study on Burnout, Work Engagement, and Performance). *Right Management Consultants, Diemen*.
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187–200. <https://doi.org/10.1080/02678370802393649>
- Bandura, A. (1986). *Social foundations of thoughts and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bedarkar, M., & Pandita, D. (2014). A study on the drivers of employee engagement impacting employee performance. *Procedia-Social and Behavioral Sciences*, 133, 106–115. <https://doi.org/10.1016/j.sbspro.2014.04.174>
- Bierly, P. E., III, Kolodinsky, R. W., & Charette, B. J. (2009). Understanding the complex relationship between creativity and ethical ideologies. *Journal of Business Ethics*, 86(101), 112.
- Binnewies, C., Ohly, S., & Sonnentag, S. (2007). Taking personal initiative and communicating about ideas: What is

- important for the creative process and for idea creativity? *European Journal of Work and Organizational Psychology*, 432–455. <https://doi.org/10.1080/13594320701514728>
- Brungardt, C. (1997). The making of leaders: A review of the research in leadership development and education. *Journal of Leadership Studies*, 3(3), 81–95. <https://doi.org/10.1177/107179199700300309>
- Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human Resource Management Review*, 16(2), 199–208. <https://doi.org/10.1016/j.hrmr.2006.03.012>
- Cheung, M. F., & Wong, C. S. (2011). Transformational leadership, leader support, and employee creativity. *Leadership & Organization Development Journal*, 32(7), 656–672. <https://doi.org/10.1108/01437731111169988>
- Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, 471–482.
- Conger, J. A., & Kanungo, R. N. (2000). Charismatic leadership and follower effects. *Journal of Organizational Behavior*, 21, 747–767. [https://doi.org/10.1002/\(ISSN\)1099-1379](https://doi.org/10.1002/(ISSN)1099-1379)
- De Stobbeleir, K. E. M., & Ashford, S. J. (2011). Self-regulation of creativity at work: The role of feedback-seeking behavior in creative performance. *Academy of Management Journal*, 54(4), 811–831.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.).
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44, 350–383. <https://doi.org/10.2307/2666999>
- Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52, 591–620.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>
- Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). “Can you see the real me?” A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16, 343–372. <https://doi.org/10.1016/j.leaqua.2005.03.003>
- George, B. (2003). *Authentic leadership: Rediscovering the secrets to creating lasting value*. John Wiley & Sons.
- Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses’ work engagement and job satisfaction. *Journal of Nursing Management*, 18(8), 993–1003. <https://doi.org/10.1111/j.1365-2834.2010.01126.x>
- Harter, S. (2002). Authenticity. *Handbook of positive psychology*, 382–394.
- Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: Does method really matter? *Psychological Science*, 24(10), 1918–1927. <https://doi.org/10.1177/0956797613480187>
- Hsiung, H. H. (2012). Authentic leadership and employee voice behavior: A multilevel psychological process. *Journal of Business Ethics*, 107(3), 349–361. <https://doi.org/10.1007/s10551-011-1043-2>
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly*, 16, 373–394. <https://doi.org/10.1016/j.leaqua.2005.03.002>
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.2307/256287>
- Katz, D. (1964). The motivational basis of organizational behavior. *Behavioral Science*, 9(2), 131–146. [https://doi.org/10.1002/\(ISSN\)1099-1743](https://doi.org/10.1002/(ISSN)1099-1743)
- Kumar, V., & Pansari, A. (2015). Measuring the benefits of employee engagement. *MIT Sloan Management Review*, 56(4), 67–72.
- Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, 85(3), 407–416. <https://doi.org/10.1037/0021-9010.85.3.407>
- Madjar, N., Oldham, G. R., & Pratt, M. G. (2002). There’s no place like home? The contributions of work and nonwork creativity support to employees’ creative performance. *Academy of Management Journal*, 45(4), 757–767. <https://doi.org/10.2307/3069309>
- Malik, N., Dhar, R. L., & Handa, S. C. (2016). Authentic leadership and its impact on creativity of nursing staff: A cross sectional questionnaire survey of Indian nurses and their supervisors. *International Journal of Nursing Studies*, 63(2016), 28–36. <https://doi.org/10.1016/j.ijnurstu.2016.08.004>
- May, D. R., Gilson, R. L., & Harter, L. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology*, 77, 11–37. <https://doi.org/10.1348/096317904322915892>
- Menguc, B., Auh, S., Fisher, M., & Haddad, A. (2013). To be engaged or not to be engaged: The antecedents and consequences of service employee engagement. *Journal of Business Research*, 66(11), 2163–2170. <https://doi.org/10.1016/j.jbusres.2012.01.007>
- Meyerson, S. L., & Kline, T. J. B. (2008). Psychological and environmental empowerment: Antecedents and consequences. *Leadership and Organization Development Journal*, 29, 444–460. <https://doi.org/10.1108/01437730810887049>
- Michie, S., & Gooty, J. (2005). Values, emotions, and authenticity: Will the real leader please stand up? *The Leadership Quarterly*, 16(3), 441–457. <https://doi.org/10.1016/j.leaqua.2005.03.006>
- Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extrarole efforts to initiate workplace change. *Academy of Management Journal*, 42(4), 403–419. <https://doi.org/10.2307/257011>
- Muceldili, B., Turan, H., & Erbil, O. (2013). The influence of authentic leadership and creativity and innovativeness. *Social and Behavioral Sciences*, 99(1), 673–681.
- Nunnally, J. C., & Bernstein, I. H. (1994). The assessment of reliability. *Psychometric Theory*, 3(1), 248–292.
- Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39, 607–634. <https://doi.org/10.2307/256657>
- Peterson, S. J., Walumbwa, F. O., Avolio, B. J., & Hannah, S. T. (2012). The relationship between authentic leadership and follower job performance: The mediating role of follower positivity in extreme contexts. *The Leadership Quarterly*, 23, 502–516. <https://doi.org/10.1016/j.leaqua.2011.12.004>
- Randolph, W. A. (1995). Navigating the journey to empowerment. *Organizational Dynamics*, 23(4), 19–32. [https://doi.org/10.1016/0090-2616\(95\)90014-4](https://doi.org/10.1016/0090-2616(95)90014-4)
- Rego, A., Sousa, F., Marques, C., & Cunha, M. P. (2012). Hope and positive effect mediating the authentic leadership and creativity relationship. *Journal of Business Research*, 67(2014), 200–210.
- Robertson-Smith, G., & Markwick, C. (2009). *Employee engagement: A review of current thinking*. Brighton: Institute for Employment Studies.

- Ryan, R. L., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), 600–619. <https://doi.org/10.1108/02683940610690169>
- Salanova, M., & Schaufeli, W. B. (2008). A cross-national study of work engagement as a mediator between job resources and proactive behaviour. *The International Journal of Human Resource Management*, 19(1), 116–131. <https://doi.org/10.1080/09585190701763982>
- Schaufeli, W. B., & Bakker, A. B. (2003). *UWES – Utrecht work engagement scale: Test manual*. Utrecht: Department of Psychology, Utrecht University.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. [https://doi.org/10.1002/\(ISSN\)1099-1379](https://doi.org/10.1002/(ISSN)1099-1379)
- Schaufeli, W. B., Salanova, M., González-romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A confirmative analytic approach. *Journal of Happiness Studies*, 3, 71–92. <https://doi.org/10.1023/A:1015630930326>
- Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *The Journal of Applied Psychology*.
- Semedo, A. S. D., Coelho, A. F. M., & Ribeiro, N. M. P. (2017). Authentic leadership and creativity: The mediating role of happiness. *International Journal of Organizational Analysis*, 25(3), 395–412.
- Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, 15(1), 33–53. <https://doi.org/10.1016/j.leaqua.2003.12.004>
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement and validation. *Academy of Management Journal*, 38(5), 1442–1465. <https://doi.org/10.2307/256865>
- Steffens, N. K., Haslam, S. A., Kerschreiter, R., Schuh, S. C., & Dick, R. (2014). Leaders enhance group members' work engagement and reduce their burnout by crafting social identity. *Zeitschrift für Personalforschung*, 28(1–2), 173–194.
- Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment. *Academy of Management Review*, 15, 666–681.
- Valentine, S., Godkin, L., Fleischman, G. M., & Kidwell, R. (2011). Corporate ethical values, group creativity, job satisfaction and turnover intention: The impact of work context on work response. *Journal of Business Ethics*, 98, 353–372.
- Vinarski-Peretz, H., & Carmeli, A. (2011). Linking care felt to engagement in innovative behaviors in the workplace: The mediating role of psychological conditions. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 43–53. <https://doi.org/10.1037/a0018241>
- Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management*, 34(1), 89–126.
- Walumbwa, F. O., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. J. (2010). Psychological processes linking authentic leadership to follower behaviors. *The Leadership Quarterly*, 21(5), 901–914. <https://doi.org/10.1016/j.leaqua.2010.07.015>
- Zhang, X., & Bartol, K. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53(1), 107–128. <https://doi.org/10.5465/AMJ.2010.48037118>
- Zhou, J. (2003). When the presence of creative coworkers is related to creativity: Role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of Applied Psychology*, 88(3), 413–422. <https://doi.org/10.1037/0021-9010.88.3.413>
- Zhou, J., & George, J. M. (2001). When openness to experience and conscientiousness are related to creative behaviour: An interactional approach. *Journal of Applied Psychology*, 86, 513–524.
- Zhou, J., & Ren, R. (2011). Striving for Creativity. In *The Oxford handbook of positive organizational scholarship* (Chapter 8)
- Zhou, J., & Ren, R. (2012). Striving for creativity: Building positive contexts in the workplace. In K. S. Cameron & G. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 97–109). New York: Oxford University Press.
- Zhou, J., Christina, E., & Shalley, C. E. (2003). Research on employee creativity: A critical review and directions for future research. *Research in Personnel and Human Resources Management*, 165–217.
- Zhu, W., May, D. R., & Avolio, B. J. (2004). The impact of ethical leadership behavior on employee outcomes: The roles of psychological empowerment and authenticity. *Journal of Leadership & Organizational Studies*, 11(1), 16–26.



© 2018 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

