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Mediating Role of Psychological Capital in the Relationship of Authentic Leadership and Work Engagement

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Due to the importance of leadership in the development of organizations, a wave of interest by focusing on positive approaches to leadership has emerged; one of them is authentic leadership. Accordingly, the present research aimed to study the mediating role of psychological capital in the relationship between authentic leadership and work engagement. Statistical population consisted of all employees of a big steel factory in Isfahan, among which 218 were selected through convenience sampling method. The research instruments consisted of authentic leadership (Walumbwa et al., 2008), Utrecht work engagement (Schaufeli & Bakker, 2003), and psychological capital (Nguyen & Nguyen, 2012) questionnaires. Data were analyzed by using Pearson's Correlation coefficient and structural equation modeling (SEM). Results revealed that significant positive relationship existed between all components of authentic leadership with components of psychological capital and work engagement. Moreover, the proposed model had appropriate goodness of fit and there were significant chain relationships between authentic leadership and psychological capital with work engagement. According to the findings of this study, it can be concluded that authentic leadership directly encourages employees' work engagement, and indirectly, through the impact on the psychological capital, it increases the worker's engagement. Based on the results of the effect of authentic leadership on psychological

capital and employees work engagement, taking advantage of the authentic leaders through selection, placement and successor planning processes should be considered by the organizations' top managers.

Keywords: psychological capital, authentic leadership, work engagement

Today's organizations need energetic and enthusiastic employees who are passionate and interested in their work, absorbed by their jobs and conduct their tasks perfectly (Bakker & Leiter, 2010). Work engagement, as a positive organizational behavior, is a psychological state opposite to job burnout (Schaufeli, Bakker & Salanova, 2006). It refers to a penetrating, stable, and positive mental state associated with vigor, dedication, and absorption (Schaufeli et al., 2006). Vigor is defined as high energy levels, a subjective mental elasticity during work, a desire to do the best and resistance in the face of problems. Dedication means full engagement and experiencing a strong sense of meaningfulness, passion, inspiration, pride and challenge. Absorption is characterized by a complete concentration and fascination with work when the time fleets and the person has difficulty in leaving the work. According to Schaufeli and Bakker (2004), enthusiasm is the result of feedback, support and guidance from managers. Various definitions of work engagement have been presented so far, but there is still no universally accepted and approved definition (Macleod & Klark, 2009). According to Macleod & Klark (2009), this is due to the fact that the employees' work engagement is a new paradigm of human resources and because of its diverse uses, has multiple definitions.

Most of the definitions acknowledge that engagement is rooted in personal and environmental resources (Macey & Schneider, 2008). According to Gibbons (2006), work engagement is an emotional and identity relationship of an employee with his job,

organization, manager and colleagues, which affects his efforts. [Maslach \(2001\)](#) also describes engagement as a positive and real thought described by power, sacrifice, and attractiveness, making people willing and satisfied to carry out their jobs ([Sparrow, 2009](#)). [Bakker, Albrecht, and Litter \(2011\)](#) showed that engagement could mean a high level of energy and attachment. In most cases, work engagement is defined as an intellectual and emotional commitment by employees towards their work ([Hayase, 2009](#)). [Christian, Garza & Slaughters \(2011\)](#) define work engagement as a relatively fixed state of mind-reflecting individuals' simultaneous investment of energies on experiences and functions. [Schaufeli \(2002\)](#) presented the most commonly used definition of work engagement as: "a positive and satisfactory mental state about work, in which a person has a strong sense of vigor and an effective relationship with his work tasks, capable of responding to job demands". He also stated that engagement is more than a transient and specific emotional state referring to a progressive and emotional cognitive state that focuses on a subject, event, or particular behavior ([Schaufeli, 2002](#)).

According to [Bakker and Demerouti \(2008\)](#), the employees work engagement consists of the following three aspects cognitive, emotional, and behavioral aspects. The cognitive aspect relates to employees beliefs about organization, leaders, and working conditions. The emotional aspect relates to employees' feelings and attitude towards the organizations, leaders, and working conditions. Finally, the behavioral aspect creates value-added for the organizations and involves deliberate and voluntary work of employees to increase their work engagement, leading to more accountable tasks. Therefore, due to the importance and role of these constructs in the success of

organizations, identifying the factors affecting it has been widely considered by scientists and practitioners of industrial and organizational psychology. In this regard, studies carried out by [Seyed Nagavi & Kahe \(2012\)](#); [Yousefi, Eidipour and Gholami \(2015\)](#); [Zarei \(2015\)](#); [Mir Mohammadi, Rahimian and Khanabadi \(2012\)](#), and [Hidayat \(2016\)](#), showed that authentic leadership is one of the most important factors affecting work engagement. The reason for the influence of authentic leadership on work engagement is that due to their high positive psychological capacities, authentic leaders are able to create and strengthen positive psychological assets in their subordinates and, as a result, are able to influence positive organizational achievements, including work engagement among employees.

For this reason, during the last decade, in psychology and organizational science, a wave of interest and focus on positive-oriented approaches to leadership was awakened. Although positivism is certainly not new in either of these two disciplines, the positive psychological movement felt the need for a greater understanding of the unique contribution of positive psychological constructs to various aspects of life, including the work environment. The introduction of positive psychology into the workplace is related to a research conducted at Nebraska and Michigan universities, which was a wave of attention to positivism in the workplace ([Avey & Luthans, 2010](#)). Positivism has created a new process and paradigm of theorizing, research and application in the field of management and organizational behavior, and in general organizational studies, and has led to the study of positive concepts. [Luthans & Youssef \(2010\)](#) argued that the need for positivity in the workplace is that the need for a positive approach is the need for an evidence-based approach, for a performance-based approach, and for a developing approach.

Researchers have used these as the basis for their research and theoretical development, presenting a scientific framework called positive organizational behavior to research and theorize about positive psychological capacities. In addition, [Seligman \(2010\)](#) created this shift to eliminate false focus on human dysfunctions, weaknesses and mental illness for the strengths, abilities and perfection of mankind. The special focus of the application of positive psychology to organizations and human resource practices is found in two new branches: 1. Positive organizational knowledge with macro and trait-like orientation and, 2. State-like positive organizational behavior with a micro-orientation ([Avey & Luthans, 2006](#)).

Following the studies in the field of positive psychology, attention was paid to the positive affective and emotional aspects of leadership which resulted in the authentic leadership style ([Sias & Krone, 2002](#)). In fact, authenticity refers to ones' degree of honesty with him/herself. Authenticity is also defined as the recognition and mastery of experiences, thoughts, feelings, needs, preferences, beliefs, self-awareness, and having a real self ([Avolio, 2009](#)). [Walumbwa, Gardner, Avolio, Wernsing, and Peterson \(2008\)](#) defined authentic leadership as a pattern of behavior inspired by positive emotional and behavioral capacities and having influence on them. Authentic leaders do not only have positive psychological capacities (self-efficacy, flexibility, optimism, and hope), but can also enhance these positive psychological capacities in the employees ([Walumbwa, 2008](#)). The authentic leaders are aware of their knowledge, weaknesses and strengths and the field of work, and are trusted, hopeful, optimistic, futuristic, flexible, ethical, and conscientious. They create opportunities for the growth of leadership capacities in others. In a different definition of authentic leadership, it is

considered as a high-level multidimensional concept including self-awareness, a balanced information processing, a relational transparency and an internalized moral perspective (Walumbwa, 2008, quoted by Mazutis, 2011). Gardener, Avalio, Luthans, Walumbwa (2005) argue that authentic leaders have specific social behavior and life history that makes them become authentic leaders. Therefore, authentic leaders, due to their psychological and behavioral characteristics, improve the development of psychological capital in their subordinates.

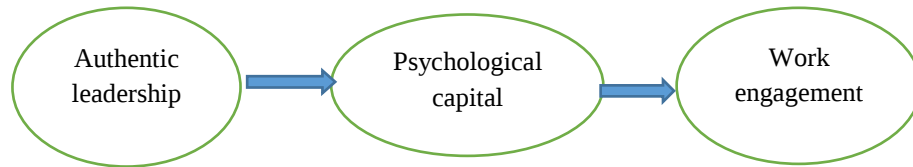
Accordingly, studies conducted by MirMohammadi, Rahimian and Khanabadi (2012), Yousefi, Eidipour and Gholami (2015), Penger & Cerne (2014), have shown that authentic leadership affects psychological capital.

Luthans (2010) defined positive organizational behavior as the study and application of human resource abilities and positive psychological capacities that can be measured, enhanced, and strengthened to improve performance in today's working environments. He argued that psychological capital is a growing state-like construct. In general, based on these criteria, Luthans and Youssef (2010), after more than a decade of research and theorizing, identified four components of psychological capital: hope, efficacy, resiliency and optimism. According to them, the combination of these components causes the formation of a high-level construct which is called psychological capital (Luthans & Avolio, 2009). It has also been shown that the total psychological capital is larger than its own components. When all these components are simultaneously taken into consideration, on this basis, they have a synergistic effect on each other (Luthans and Youssef, 2010). In this regard, research has shown that psychological capital affects a wide range of individual and organizational outcomes, such as organizational commitment, job

satisfaction, pessimism, and counter productive work behavior (Luthans & Youssef, 2010). Therefore, based on the theoretical framework of the present research, it is expected that psychological capital would cause employee's work engagement. In this regard, some studies have been conducted by Kamly, Yazdani, Kyaramanesh and Barafkon (2016), Ghana Nia, Arshadi, Bashlidah, and Forouhar (2005), have shown Psychological capital is associated with work engagement and is a variable affecting it.

Based on the research in Iran, so far, there has been no study to investigate the chain relationships between authentic leadership, psychological capital and work engagement. Therefore, the present study was intended to provide knowledge about the relationships of these variables in Iranian organizations in order to expand the present knowledge about the functions of authentic leadership in the development of psychological capital and work engagement of employees in the workplace, expanding theories on the consideration of individuals' positive points and its component in organizations.

Therefore, based on the review of theoretical and research foundations, it can be concluded that authentic leaders, due to their high positive psychological capabilities, are able to create and strengthen positive psychological capitals in their subordinates and thus they are able to influence the positive organizational consequences (work engagement). Accordingly, the purpose of this study was to investigate whether a (significant) relationship exist between authentic leadership and psychological capital with work engagement. In answering this, the conceptual model of the present study was developed as in Fig. 1.



Method

Since this research aimed to investigate the mediating role of psychological capital in the relationship between authentic leadership and work engagement among the employees of a large steel production plant; the research method used for achieving this purpose was a non-experimental quantitative correlational study, which deals with a series of chain relationships among research variables. Also, the structural equation modeling was used as the statistical method in this research.

Statistical population, sample and sampling method

The statistical population of the present research consisted of all employees of a steel production factory in the spring of 2017. Considering the above sample size, the statistical population of this study, based on the sample determination table, by the statistical population of [Mitchel and Jolley \(2007\)](#), were 225 people at the statistical confidence level of 95%. In order to control the response rate, 250 questionnaires were distributed by convenience sampling. After collecting questionnaires, 32 non-usable questionnaires were identified and finally, 218 questionnaires were analyzed.

Instrument

The following questionnaires were used to obtain the required information:

Authentic Leadership

This questionnaire was developed by [Walumbwa et al. \(2008\)](#), it contains 16 items which address four aspects of authentic leadership with its 5-point Likert Scale. The four subscales of this questionnaire consist of self-awareness, 4 items (4, 3, 2, and 1), relational transparency, 4 items (8, 7, 6, and 5), internalized ethical perspective, 4 items (12, 11, 10, and 9) and the balanced information processing with 4 items (16, 15, 14, and 12). In a research done by [Ganbari et al. \(2016, cited in Ghanenia et al, 2005\)](#), the construct validity and internal consistency of this scale were confirmed by confirmatory factor analysis and its reliability was assessed using Cronbach's alpha method, which was .96 for the whole authentic questionnaire and for its components, self-awareness was .86, communication transparency was .84, internalized ethical perspective was .86, and balanced information processing was .86. In the present study, reliability of this questionnaire was obtained through Cronbach's alpha (self-awareness, .85, relational transparency, .87, internalized ethical perspective, .86, and balanced information processing .85). Obtaining a high score in this questionnaire reflects the high level of employee perception of leadership authenticity.

Psychological Capital

The 13-item questionnaire of psychological capital was developed by [Nguyen et al. \(2012, quoted from Golparvar \(2016\)\)](#). The questionnaire has four subscales of self-efficacy with 4 items (4, 3, 2, and 1), optimism, 3 items (7, 6, and 5), hope, 3 items (10, 9, and 8) and resiliency, 3 items (13, 12, 11). Among the four subscales of this questionnaire, the overall score of psychological capital is obtained. [Nguyen et al. \(2012\) quoted from Golparvar](#)

(2016), used an exploratory factor analysis to document the construct validity of this questionnaire, and indicated that the mean Cronbach's alpha for the whole questionnaire was .71 and for the four subscales of self-efficacy, optimism, hope and resiliency the values were .64, .60, .68 and .68, respectively. In the present study, reliability of this questionnaire was obtained as self-efficacy .69, optimism .67, hope .83, and resiliency .8, through Cronbach's alpha, respectively. Gaining a high score in this questionnaire reflected the high level of respondent's psychological capital.

Work Engagement

This questionnaire was developed by [Schaufeli & Bakker, \(2003 quoted from Molae, Mehdad, Golparvar, \(2014\),](#) and contains 17 items and measures three aspects of work engagement with a 6-point Likert scale. The three subscales of this questionnaire consist of vigor with 6 items (17, 15, 12, 8, 4, and 1), dedication with 5 items (2, 5, 7, 10, and 13) and absorption with 6 items (3, 6, 9, 11, 14, and 6). The construct validity of this questionnaire was investigated by [Mehdad and Tadayoni \(2012\), quoted from Molae, Mehdad, Golparvar, \(2014\),](#) using a varimax-based exploratory factor analysis, and according to Kaiser-Mayer-Olkin (KMO), it was equal to .92 and Bartlett's test which was equal to 20.022, was significant ($P < .01$). The reliability of the questionnaire was obtained using Cronbach's alpha as .94 for the whole questionnaire and .98, .89 and .87 for the components of vigor, dedication, and absorption, respectively. In the present study, through Cronbach's alpha the reliability of this questionnaire was obtained as .91. Gaining a high score in this questionnaire reflects a high level of work engagement among respondents.

Analysis Method

The questionnaires of the present study were answered by respondents at their work place, within a time period of 20 to 30 minutes as self-report. After collecting questionnaires, the data were analyzed using Pearson's correlation coefficient and structural equation modeling, using SPSS and AMOS software.

Results

In Table 1, correlation coefficients are presented among research variables.

Table 1
Matrix of Correlation Coefficients of Research Variables (Components of Authentic Leadership with Components of Psychological Capital and Work Engagement) * p <.05 ** p <.01

	Self- awareness	Communication Transparency	internalized ethical perspective	Balanced information processing	Efficacy	Optimism	H o pe	Resiliency	Work engage ment
Self-awareness	-								
Communication Transparency	.784	-							
internalized ethical perspective	.778	.838	-						
Balanced information processing	.793	.809	.827	-					
Self-efficacy	.12	.14*	.14*	.11	-				
Optimism	.15*	.19**	.13	.11	.446	-			
Hope	.10	.12	.09	.09	.589	.574	-		
Resiliency	.45**	.14*	.45**	.45**	.574	.555	.734	-	
Work engagement	.23**	.33**	.26**	.22**	.38**	.21**	.3**	.25**	-

Hypothesis 1: There is a significant relationship between authentic leadership (self-awareness, communicative transparency, internalized ethical perspective and balanced information processing) with work engagement.

As seen in Table 1, each of the four components of authentic leadership has a positive and significant relationship ($p < .01$) with work engagement. Thus, the first hypothesis is confirmed.

Hypothesis 2: There is a significant relationship between the psychological capital (self-efficacy, optimism, hope, and resiliency) and work engagement.

As seen in Table 1, each of the four components of psychological capital has a positive and significant relationship ($p < .01$) with work engagement. Thus, the second hypothesis of the research is confirmed.

Hypothesis 3: There is a significant relationship between the authentic leadership (self-awareness, communication transparency, internal ethical perspective, and balanced information processing) and psychological capital (self-efficacy, optimism, hope, and resiliency).

As indicated in Table 1, each of the four components of authentic leadership had a positive and significant relationship with two of the three components of psychological capital ($p < .01$),

there was no significant relationship with hope, despite the existence of a relationship.

Hypothesis 4: There are significant chain relationships between authentic leadership, psychological capital and work engagement.

The result of this hypothesis is indicated in Table 2.

Table 2**Paths of Authentic Leadership Model with Psychological Capital and Work Engagement**

	Models' paths	B	SE	β	<i>p</i>	R²
1	Authentic leadership→ Psychological capital	.11*	.05	.15*	.04	.023
2	Psychological capital → work engagement	1.75**	.4	.31**	.001	.095

* $p < .05$ ** $p < .01$

A few points are worth mentioning before presenting explanations related to Table 2. In general, a suitable model in terms of fit indices should have an insignificant chi-square, a chi-square to degree of freedom ratio of lower than 3, a goodness of fit index (GFI), and a comparative fit index (CFI) of more than 95%, an incremental fit index (IFI) greater than .9, the root mean of residual (RMR) lower than .05 and the root mean square of error approximation (RMSEA) lower than .08 (Schumacker & Lomax, 2004). Based on the explanations presented, as observed in Table 2, the authentic leadership had a significant relationship with psychological capital ($p < .05$, $\beta = .15$), which could explain 2.3% of the variance of this variable. There was a significant relationship between psychological capital ($\beta = .01$, $\beta = .31$) and work engagement which could explain 9.5% of the variance of this variable. The fit indices of the final pattern, the results of which are presented in Table 2, are as follows: the chi-square of the final model is equal to 26.97 and insignificant ($p > .05$), the

degree of freedom is 24, the chi-square ratio to the degree of freedom is 1.21, GFI = .97, CFI = .996, IFI = .996 and RMSEA = .31. Based on what was presented in Table 2, the fourth hypothesis of the research i.e. a (significant) relationship exists between the authentic leadership, the psychological capital, and the work engagement in a chain of relationships is confirmed. Figure 2 illustrates the final pattern of research.

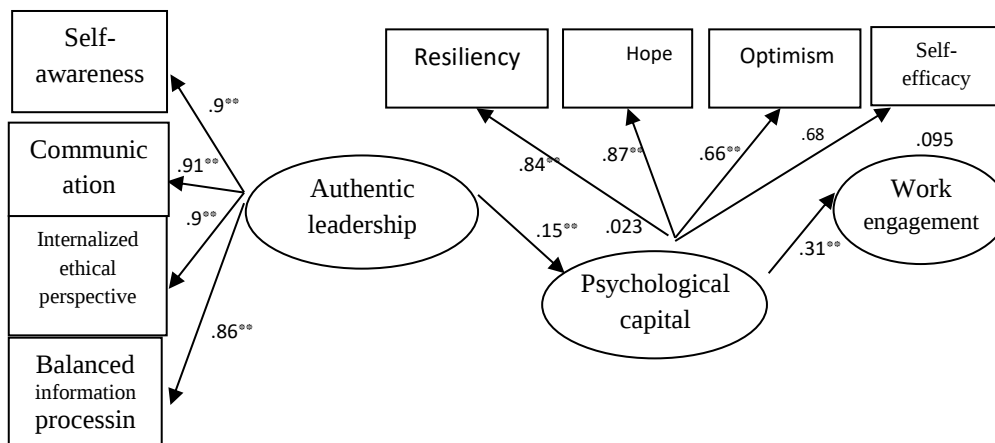


Figure 2. The Final Structural Pattern of the Relationship between Authentic Leadership with Psychological Capital and Work Engagement

Discussion

The result of the first hypothesis indicated that there was a significant relationship between the components of authentic leadership and work engagement. These results are in line with the results of [Yousefi et al., \(2015\)](#), [Seyed Naghavi and Kahe \(2012\)](#), [Mirmohammadi, Rahimian and Khan Abadi \(2012\)](#). Thus, it can be argued that authentic leadership is defined as genuine, reliable and dependable, true and real style where dependability is considered as an inherent characteristic of

authentic leadership. Therefore, dependable, stable, coherent, and committed leaders accept proposals (Hassan & Ahmed, 2011). When employees recognize that their direct supervisors and superior management have the required insight and ability to increase organization growth and productivity by adopting appropriate decisions, their confidence in the company's future prosperity increases. In other words, employee work engagement increases when they trust in the competence and authority of the leaders (Hassan & Ahmed, 2011). Trust, particularly in leadership, is an essential and lasting component of the organization's success. Leader-member relationship is defined on the basis of mutual trust, cooperation, commitment, dependability and equality. The relationship between authentic leadership and work engagement is that they strengthen one another, and increase trust, either directly or indirectly, leading to positive attitudes and behaviors, such as the organizational citizenship behavior and the employee's work engagement (Hassan & Ahmed, 2011). Also, Rucker et al. (2011) argued that authentic leadership, by creating trust in employees, would produce favorable outcomes among them, including employee work engagement. Therefore, interpersonal trust in the organization, especially the trust that the employees have on the leader, is an important factor in the employee's work engagement.

The result of the second hypothesis indicated that there was a significant relationship between the components of the psychological capital with the work engagement. Moghimi mofard (2014), Rahimi, Samani, Nouri, Namdari (2012), Bagherzadeh (2016), showed the same results. It can be argued that positivism is a capital, as some studies showed that in organizations with more opportunities for employees to show their capabilities, they have significantly higher work

engagement, which is likely to lead to better performance, customer loyalty, and employee's maintenance and productivity. Research showed that positive employees could better overcome the emerging challenges of their work environments, and thus have better performance and better behavioral attitudes. These employees support and help organizations at times of crisis. Therefore, it can be stated that psychological capital, as a positive approach to the environment, causes optimism and hope which due to our interpretations, affects our events and leads to the improvement of employees' work engagement.

The result of the third hypothesis indicated that there was a significant relationship between the components of authentic leadership and the components of the psychological capital. These results are consistent with the results of [MirMohammadi, Rahimian and Khanabadi \(2012\)](#), [Yousefi et al., \(2015\)](#), [Penger & Cerne \(2014\)](#). Based on this, it can be argued that authentic leaders play a positive role on the growth of employees' psychological capital. In fact, many scholars believe that the first mechanism that makes authentic leaders influential on their subordinates is their role as a positive model ([Meacham, 2007](#)). This factor can affect the psychological capital of employees. On the other hand, authentic leaders display behaviors that actually lead to an increased psychological capital in employees ([Saks & Gruman, 2014](#)). Authentic leaders use employee participation, are responsible, provide employee with accurate information on achieving goals, provide opportunities for employee growth and take active, adaptive and positive approaches to problem solving. They remind employees of successes, give honest feedback, and welcome employees' feedback ([Luthans et al., 2010](#)). Therefore, all of these factors have a significant impact on the growth and improvement of employees' psychological capital. Also, due to

the ability to transfer psychological capital in organizations and employees ([Avey et al., 2010](#)), optimism, hope, efficiency, and resilience are cultivated in employees.

The result of the fourth hypothesis indicated that the authentic leadership, through the strengthening of psychological capital, causes work engagement. The results correlated with the results of [KhaliliBaher \(2013\)](#), [Zarei \(2015\)](#). Accordingly, it can be argued that the authentic leaders have features such as accountability, transparency in the transmission of information, providing opportunities for employee growth, the use of active, adaptive and positive approaches to problem solving, providing honest feedback to employees and welcoming their feedback which will lead to the development and improvement of psychological capital. As a result, the development of employees' psychological capital as a positive approach affects people's interpretations of environmental events and leads to improved employee work engagement.

Based on the relationship between authentic leadership with psychological capital and work engagement, managers are recommended to improve psychological capital and work engagement, use programs to increase employee participation, develop a culture of accountability, provide accurate information about goals achievement, provide opportunities for employee growth, use active, adaptive and positive approaches to solving organizational problems, remind employees of their successes, offer honest feedback and welcome employee feedback. The present study had some limitations including its conduction among the employees of a steel plant. So, generalizability should be done with cautious. Also, the correlation method cannot provide cause and effect. Convenience sampling method and selection of only male employees were the other limitations.

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