Collective Efficacy as a Mediator of the Relationship between Authentic Leadership and Well-being at Work

Semra Ozkan[1], Adnan Ceylan[1]

[1]Gebze Technical University, Turkey

Correspondence: Semra Ozkan, Gebze Technical University, Turkey

Abstract

Prior research, both theoretically and empirically, has revealed that authentic leadership is positively related to work attitudes and behaviors. But the fundamental mechanisms through which an authentic leader utilizes his/her influence on followers have not fully been explored. To provide a clear insight into authentic leadership and the inner working of the construct, further research is needed. This study addresses that needs and proposes that positive organizational outcomes are fundamentally related with the emotions felt by followers at work and followers' belief in their competences. Thus, the mechanisms that link the authentic leadership behavior to positive work outcomes are followers' well-being at work and collective efficacy perceptions. In this way, the aim of present study is to explore the influence of authentic leadership behavior on employees' well-being at work and also develop a clear understanding about the role of collective efficacy perceptions of employees' in that relationship. We conducted the research with full-time employed 556 construction engineers. Consequently, structural equation modeling results exposed that there is a positive relationship between authentic leadership and well-being at work. Moreover collective efficacy perception of employees' partially mediates this relationship. The implications of results and routes for future research are argued.

Keywords: authentic leadership, well-being at work, collective efficacy, structural equation modeling

1. Introduction

Today the feelings in the workplace are more important than ever before for the employees (Kaplan, Cortina, Ruark, LaPort, & Nicolaides, 2014; Lee, Kim, Son, & Lee, 2011; Gooty, Connelly, Griffith, & Gupta, 2010; Tsai, Chen, & Cheng, 2009; Avolio, Gardner, Walumbwa, Luthans, & May, 2004a; Dasborough & Ashkanasy, 2005). Employees who are spending one-third of their day at work, call into question the job they do and look for meaning at their work for both themselves and the society. So, they prefer to work at the organizations in which they feel happy, important and worthwhile. Such differences at the expectations of the employees' necessitate modifying the attitudes and the behaviors of the leaders. As Avolio, Luthans and Walumbwa (2004b) assert, the contradictions facing organizations require a leadership approach that is able to restore confidence, positive emotions and expressiveness.

At that point, authentic leadership has emerged as the foundation that forms the basis for positive leadership approaches that put forth to fulfill the shortages of existing leadership styles and restore confidence, positive emotions and meaningfullness (Avolio & Gardner, 2005).

Authentic leadership describes to what extent a leader shares true information with his followers to make them able to take competent decisions and know about their leader, displays consistency between his deeds and words, allows followers to give voice to their assessments, endures their values to be criticized, builds transparent and trust-based relationships that enable followers to conceive the necessities and justifications behind his decisions or deeds (Walumbwa, O. Wang, P. Wang, Schaubroeck, & Avolio, 2010; Avolio & Gardner, 2005; Avolio et al, 2004a). Authentic leadership is conceptualized as involving four components; self awareness (being conscious of one's strengths and weaknesses, and his/her influence on others as a leader), transparency (building open and trust based relationships with others), internalized moral perspective (the ethic standards of the leader), balanced processing (being open to different views and opinions before decision-making) (Kernis, 2003; Ilies, Morgeson, & Nahrgang, 2005; Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Prior research, both theoretically and empirically, has revealed that authentic leadership is positively related to work attitudes and behaviors (Yammarino, Dionne, Schriesheim, & Dansereau, 2008; Luthans, & Avolio, 2003 ; Illies et al., 2005; Avolio et al., 2004b; Avolio et. al., 2004a; Gardner et al., 2005; Walumbwa et al., 2008; Walumbwa et al., 2010;

Gardner & Schermerhorn, 2004, Chan, Hannah, & Gardner, 2005; Dasborough & Ashkanasy, 2005; Eagly, 2005; Fields, 2007). But the fundamental mechanisms through which an authentic leader utilizes his/her infuence on followers have not fully been explored. Ilies et al. (2005), propose such leaders are able to have positive conclusions on followers via some influence processes, such as identification, behavioral modeling, social exchanges. Avolio et. al. (2004a), also emphasize identification processes for positive influences, but differently they underline the mediating role of positive emotions, hope, trust and optimism between authentic leader behavior and positive work attitudes and behaviors relationship in their theoretical work.

To provide a clear insight into authentic leadership and the inner working of the construct, further research on the conceptual and empirical links between authentic leadership and work-related outcomes is needed (Avolio et. al., 2004b). The present study aims to satisfy that needs and proposes that positive organizational outcomes are fundamentally related with the emotions felt by followers at work and followers' belief in their competences. Thus the mechanisms that link the authentic leadership behavior to positive work outcomes are followers' well-being at work and collective efficacy perceptions.

Leadership is a crucial phenomenon for organizations but if it is deprived of processes that relate it to the desired employee attitudes and behaviors, leadership can not be sufficient to achieve organizational goals. In the present study, positive emotions that employees feel at work, being described as well-being at work is appraised as the critical component that relates authentic leader behavior to positive organizational outputs. The study examines how authentic leadership behavior relates to employee's well-being at work, does collective efficacy perception of employee which is supported by the leadership behavior, influence that relationship. It is important to highlight if an authentic leader via enhancing collective efficacy perception of employee can raise employee well-being at work further or not.

This study contributes to the literature on the following matters; first of all, it is an empirical work. Because the authentic leadership literature has few empirical work, it becomes crucial to empirically prove the theories developed.

Second, prior empirical work which uses authentic leadership questionnaire (ALQ) developed by Walumbwa et al. (2008), has been chosen the samples from China and Kenya (Walumbwa et al., 2008; Walumbwa et al., 2010) to our knowledge. China is very different from other countries for many aspects, for example, its history, geography, culture, Buddhism or similar philosophy and religion, individuals' perception of life, socioeconomic preferences. Because of these fundamental differences, ALQ can better match with a sample from Turkish context. The theme that underlies authentic leadership has been expressed by Mevlana (1207-1273) eight decades ago as "Either seem as you are, or be as you seem". So the Turkish culture that adopts Mevlana's teaching, provides a new context for authentic leadership study.

Third, prior empirical work has obtained data from working MBA and evening adult students or employees working in telecom firms (Walumbwa et al., 2008; Walumbwa et al., 2010). In the present study, construction sector which becomes an area of increasing interest in Turkey is focused. For a few years, construction sector gains speed and rapidly develops. When construction sector is evaluated according to the inputs used and employment created, it has a crucial role on increasing national income, creating new work areas and possibilities. Furthermore, because of its strong relationships with other industries, construction sector can be characterized as a locomotive sector. This means that while a construction process is going on, thousands kinds of input items are being used. So a developing construction sector means developing many other sectors. As being all over the other countries, construction sector is an important economic activity area in Turkey. The construction sector's share at Gross Domestic Product is 4.4% with 10.9% growth rate (Turkish Statistical Institute http://www.turkstat.gov.tr/). It is the third sector with highest sector share and growth rate, after "Wholesale and Retail Trade" (12.1% sector share and 11.6% growth rate) and "Real Estate, Renting and Business Activities" (5.2% sector share and 14.5% growth rate). Major characteristics of the sector- the greatness of the employment potential (7.2% of the total employment in 2015), the labour-intensive technology used, the necessity and importance of collaboration, make leadership an important issue for construction organizations. In this sense, this study makes contribution to the literature by practicing authentic leadership approach and authentic leadership questionnaire to the construction sector.

As explained above, because the construction sector is a labour-intensive industry, from the perspectives of leaders, employees' emotions, especially positive ones, play a crucial role about motivating them to reach the organizational goals. Employees' well being at work will improve their emotional attachment to the organization, in turn, motivation for organizational aims and performance. An employee who feels positive emotions at work will work harder and more voluntarily, will face up to problems decisively than another one who does not.

Another indispensable necessity of the construction sector is collaboration. There are several work groups and they work in coordination. Each employee's work accomplishes another employee's work. So working in coordination and congruence is important on outputs. This coordination and congruence will affect both the time span and the quality of work done. If the members of a work group perceive high collective efficacy, they will believe in the group's

competencies, coordinate when face up to bottlenecks, strive together to achieve common goals, support each other and integrate each other's knowledge, skills or experiences to reach common goals. Especially for the construction sector, the leader must enhance employees' collective efficacy perceptions. In turn, high perception of collective efficacy can be a mechanism for the leader to raise employee well-being at work, which will conclude positive employee work attitudes and behaviors. Otherwise high levels of turnover will cause new and additional costs such as the costs of training unskilled labour, latency of the project completion date. Figure 1 represents the hypothesized model.
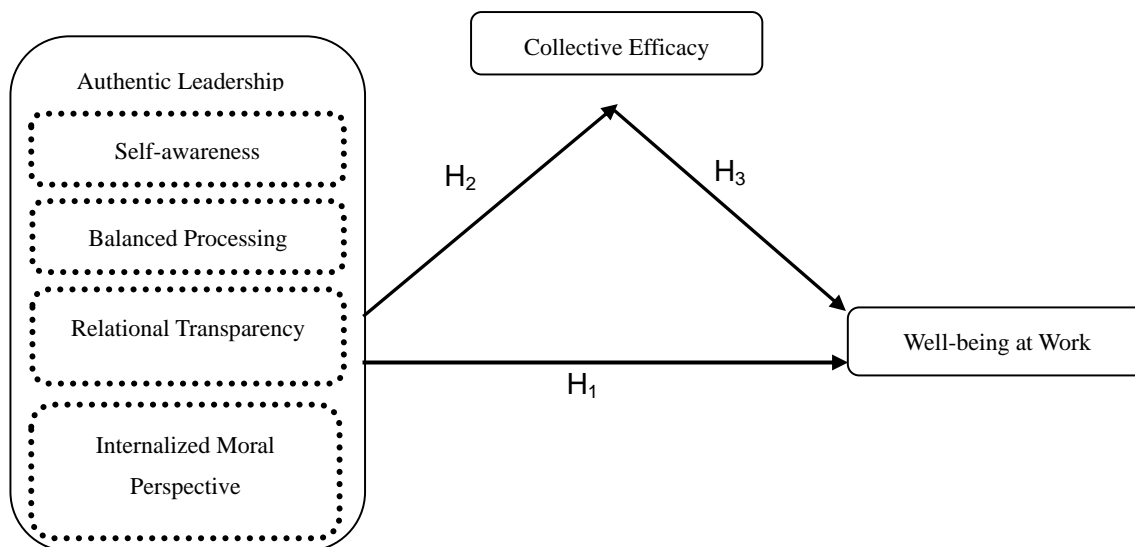

Figure 1. Hypothesized Model

2. Theory and Hypotheses

2.1 Authentic Leadership and Well-being at Work

Well-being can be described as the balance of happiness and unhappiness in one's life (Sumner, 1996). As a typical mature spends much of his/her day at work (Harter, Schmidt, & Keyes, 2003), workplace has an important role on employees' well-being. Beside the fact that work seperately can not make an adult happy, it is obvious that for any one to be exactly happy in his/her life today, he/she should be happy at work (Gavin & Mason, 2004).

Well-being, especially at work, has a crucial role in organizational management. Because it is directly related to the frequency of positive and negative emotions felt at work. Employees who feel positive emotions more than negative ones, are happier, more enthusiastic, more confident. They easily commit organization's goals and values valuntarily, put more effort to remain as a member of that organization and perceive the organizational environment as a family environment. Thus, well-being at work is positively related to desirable organizational behaviors and attitudes, for example, organizational commitment, citizenship behaviors, performance (Tsai et al., 2009; Meyer & Maltin, 2010; Panaccio & Vandenberghe, 2009; Gardner et al., 2005; Ilies et al., 2005; Sonnentag & Frese, 2003). The consequences of the concept add extra importance to it from the perspective of leaders. If a leader achieves to make followers feel happy at work, both the organization, leader and followers may benefit from the situation.

Authentic leadership is emerged as the integration of positive organizational behavior, ethical and transformational leadership areas into a more comprehensive concept of authentic leadership (Luthans & Avolio, 2003). Positive organizational behavior, which is one of the major underlying concepts of authentic leadership, focuses on positive feelings such as happiness and strengths instead of weaknesses (Yammarino et al., 2008). So a focus on positive emotions, happiness, optimism and hope constitutes the foundation of authentic leadership. Authentic leadership because of the necessity of its nature, cares about well being of the followers in many ways. First of all, an authentic leader encourages his employees' self-development and creates opportunities to learn and grow. Second, an authentic leader is self-confident, optimistic and resilient (Luthans & Avolio, 2003). Through transparent and close relationship the followers model their leader, in that way, they may achieve to be more self-confident, optimistic and resilient.

 The concepts of authenticity and well-being come to an agreement on the point that both of them expect people to be true to themselves and live according to their core selves (Waterman, 1993; Luthans, Norman, & Hughes, 2006; Gardner et al., 2005). We suggest that via role modeling, supporting and sustaining authenticity or creating a supportive organizational climate, authentic leaders may contribute to the followers' well-being at work (Gardner et al., 2005; Nelson et al., 2014; Ilies et al., 2005).

The characteristics of authentic leaders such as, high moral standards, honesty, balanced processing of information,

consistency among words and deeds, trustworthiness, clear and sincere dialogue building with the followers, reinforce the followers' trust in the leader. Authentic leaders help their followers to achieve authenticity. In other words make them to be aware of themselves, embody their self-regulation behaviors, recognize their core values. As the followers heighten their levels of self awareness and achieve to be true to themselves, they will experience greater congruity among their values and deeds. This congruity will provide the followers to feel more moral, and in turn, arise their levels of well-being (Kernis, 2003; Gardner et al., 2005). When the followers are able to adjust their actual and ideal selves, they will gain personel integrity in their lives. So that, they will increase the happiness in their lives.

An authentic leader has a hightened level of self awareness, knows and accepts his strengths and weaknesses. During interactions with the followers, an authentic leader supports their individual developments via making them discover their own strengths and weaknesses. The followers do not need to mask their weaknesses, because they trust their leader. They know that their leader would not behave them negatively because of their weaknesses, on the contrary would provide them opportunities of development and learning. In this way, while followers are perceiving that there is nobody at work who is looking for their lacks or mistakes, they will feel comfortable instead of dysfunctional stress, anxiety or any other negative emotions. After a while, as a consequence of their interactions with the authentic leader, the followers will model their leader, make an effort to aware of themselves and accept their both strengths and weaknesses. This means that they will become to be true to themselves, in turn to be more authentic. That awareness and acceptance will provide their development through the supports of the authentic leader. As they realize the enhancement in their weaknesses, they will feel higher levels of confidence and esteem.

In light of the explanations above, authentic leadership is expected to affect the followers' well being at work positively. Thus the hypothesis is,

H_1: There is a positive relationship between authentic leadership and follower's well-being at work.

2.2 Authentic Leadership and Collective Efficacy

Collective efficacy is group members' common beliefs in their abilities and competences to achieve the given assignments (Bandura, 1997).

Collective efficacy can not be described as the cumulative sum of each group member's self efficacy belief. Additionally, beside the knowledge and talents of each member, collective efficacy is emerging as a result of synergetic dynamics between the group members (Bandura, 2000). The leadership behavior plays a role in these synergetic dynamics and becomes one of the most important antecedents of collective efficacy (Sosik, Avolio, & Kahai, 1997; Chen & Bliese, 2002; Walumbwa et al., 2004). In this study, collective efficacy has been posited as a mechanism through which authentic leadership enhances followers' well-being at work.

One of the most important determinants of collective efficacy is leadership behaviors (Sosik, Avolio and Kahai, 1997). Accordingly, an authentic leader may influence his/her followers' level of collective efficacy via his/her own behaviors either positively or negatively. Positively influenced and supported collective efficacy may increase followers' well being at work that will most likely result in enhanced commitment and satisfaction (Walumbwa, Wang & Lawler, 2003; Jex & Bliese, 1999; Jex & Thomas, 2003).

Bandura (1997), has described the sources of information that shape the efficacy perceptions in social cognitive theory as proficiency and indirect experience, verbal persuasion and physiological stimulation. In light of this theory, leaders may contribute to the followers' collective efficacy perception through these sources of efficacy information. Especially an authentic leader may support and positively influence his/her followers' collective efficacy perceptions in many aspects.

An authentic leader encourages diverse viewpoints, promotes his/her followers to critical thinking and voice their different views. An authentic leader also shares information openly and expresses his/her own true thoughts. Thereby, the followers can be confident about how they will meet the leader's expectations and accomplish their task successfully. An authentic leader emphasizes the strengths of the followers while developing the weaknesses of them, so every follower in his organization has a value to add while learning from each other. Working together toward a common organizational goal is crucial for the sustainability of the organization; in order to achieve that, the followers put together their strengths to cover the weaknesses of each other and accomplish the given assignments.

An authentic leader may influence collective efficacy of the groups as being either a member of the group, the leader or the communicator of task importance (Gibson & Early, 2007). According to the Gibson and Early's (2007) theoretical model, accumulation of information, interaction and examination, lastly accomodation of information processes comprise the process of development and operation of collective efficacy. That model suggests, knowing group members' characteristics such as group member abilities is important for the development of collective efficacy. When group members know each other's skills, abilities, the group may develop a higher level of collective efficacy. First,

because an authentic leader provides the followers to be aware of both themselves and others' strengths, an authentic leader as being a group member may develop a higher level of collective efficacy.

Second, an authentic leader builds open and trust-based relationships and cooperations with followers, openly and continuously shares information required to decision making, talkes about how the followers will meet the expectations and accomplish the given task successfully. Additionally, the increased levels of inter group cooperation created by the authentic leader enhance group interaction, sharing knowledge and competences, hence the level of confidence to other group members' capabilities. Thus an authentic leader as being the communicator of task importance may develop a higher level of collective efficacy.

Third, by emphasizing the strengths of the followers while encouraging them to develop their weaknesses and setting goals compatible with their strengths, empowering, supporting and encouraging followers, an authentic leader as being the leader may make followers believe in their capabilities about setting and achieving goals.

Accordingly, these practices of an authentic leader as a whole may help followers clearly understand the standards for the tasks attained and put together each member's capabilities in order to ensure the integrity. By this means followers' collective efficacy perceptions will be nurtured and enhanced.

Based on these reasons, our hypothesis is;

H_2: There is a positive relationship between authentic leadership and collective efficacy.

2.3 Collective Efficacy as a Mediator

An authentic leader has a hightened level of self awareness, knows and accepts his strengths and weaknesses. During interactions with his/her followers an authentic leader supports their individual developments via making them discover their strengths and weaknesses. Followers do not need to mask their weaknesses, because an authentic leader would not behave them negatively when he/she knows these weaknesses, on the contrary he/she would provide his/her followers opportunities of development and learning. In this way, while followers are perceiving that there is nobody at work who is looking for their lacks or mistakes, they will feel comfort, inner peace instead of dysfunctional stress, anxiety or any other negative emotions. After a while, as a consequence of their interactions with the authentic leader, the followers will also make effort to aware of themselves and accept their both strengths and weaknesses. This means they become to be true to themselves, in turn to be more authentic. That awareness and acceptance will provide their development through the supports of the authentic leader. As they realize the enhancement in their weaknesses, they will feel higher levels of confidence and esteem. This situation will also support their belief in being successfull and accomplishing given tasks.

Collective efficacy is related to important individual and organizational outcomes (Chen & Bliese, 2002). Followers with high collective efficacy are more probably to persist in facing with obstacles and finding solutions. High collective efficacy means believing in group's capabilities to be successful. A follower who believes to be successful, will feel happier, more enthusiastic, confident and motivated. Thus, one can conclude that perception of collective efficacy is positively related to well being at work.

Because the employees in organizations are mostly nested in groups, collective efficacy becomes more important at that point. In an organizational environment which is lead by an authentic leader, each follower will accept the fact that everyone can have weaknesses, but through the supports of their leader, both himself and the other members of his work group will have opportunities to learn, develop and improve their weaknesses. As a result, each member of work groups will believe that they can achieve to be coordinated when faced with obstacles, can always support each other and can able to integrate their capabilities to perform the shared goals.

Additionally, higher collective efficacy perceptions make the followers to be more determined to be a part of solution (Bandura, 2000). Collective efficacy is a determinant of what to do. While high levels of collective efficacy is related to satisfaction, commitment, performance; followers with low efficacy are likely to prefer leaving the organization when they are faced with a problem instead of spreading on effort to overcome the problem (Walumbwa et al., 2004). Therefore, the following hypotheses are proposed;

H_3: There is a positive relationship between collective efficacy and well being at work.

H_4: Collective efficacy mediates the relationship between authentic leadership and well-being at work.

3. Research

3.1 Sample and Procedure

Full time employed, male, university graduate Turkish construction engineers compose the sample. They are all the members of Chamber of Construction Engineers in İstanbul. The construction engineers work in different public and

private construction firms. The data was collected through face-to-face survey, 13 of collected 569 questionnaires are excluded from analysis because of missing or incorrect marking. Finally, valid 556 questionnaires are analysed.

In this sample of followers, the average age is 31.7 years (s.d.= 2.3), the mean organizational tenure is 2.2 years (s.d.= 1.07).

3.2 Measures

Authentic leadership was measured with the scale developed by Walumbwa et. al. (2008).
A sample item is, "My leader analyzes relevant data before coming to a decision" with a response scale from 1 (Not at all) to 5 (Frequently, if not always).

Well-being at work was measured with the scale developed by Warr (1990) with a 5-point response scale from 0 (never) to 4 (always). Items related to positive emotions are used. Sample item is "cheerful".

Collective efficacy was measured with the scale developed by Mastrorilli et al. (2007).
A sample item is "We always achieve to coordinate in order to get over the obstacles we face" with a 5-point response scale from 1 (strongly disagree) to 5 (strongly agree).

4. Results

4.1 Factor Analyses

The principal components analysis with a varimax rotation is conducted for each measure to see whether the dimensions perceived by Turkish respondents are similar with the dimensions perceived by the respondents the measure administered, from other countries or cultures. So whether the construct exposes similar consequenses as described in literature with a different dataset from a different culture, Turkey, is explored. Table 1 represents the analyses results.

Table 1. Explanatory Factor Analyses Results

Items	Factor Loadings					Reliability Coefficient (Croanbach α)	KMO	Total Variance Explained (%)
	1	2	3	4	5			
Authentic Leadership Factor 1						.882	.900	44.134
AL3	.560							
AL10	.655							
AL11	.560							
AL12	.669							
AL13	.675							
AL14	.762							
AL15	.764							
AL16	.714							
Authentic Leadership Factor 2						.824	.843	8.714
AL1		.749						
AL2		.471						
AL4		.700						
AL5		.772						
AL6		.65						
Authentic Leadership Factor 3						.681	.623	6.786
AL7			.783					
AL8			.747					
AL9			.630					
Well-being at Work						.841	.824	56.080
WB1				.795				
WB2				.700				
WB3				.713				
WB4				.748				
WB5				.751				
WB6				.781				
Collective Efficacy						.968	.935	79.675
CE1					.902			
CE2					.880			
CE3					.911			
CE4					.919			
CE5					.902			
CE6					.886			
CE7					.840			
CE8					.901			
CE9					.889			

AL= Authentic Leadership; WB= Well-being at Work; CE= Collective Efficacy

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotations converged in 6 iterations.

Factor analysis results for authentic leadership showed that three factor explained 59.634% of the total variance in the items, and demonstrated acceptable internal consistency (coefficient α=.912). In literature the construct is described as

comprising four factors; self-awareness, relational transparency, balanced processing of information and internalized moral perspective. However, according to our dataset, Turkish construction engineers who have participated in this study perceive self-awareness and balanced processing components of authentic leadership as the same and authentic leadership as comprising three factors.

Self-awareness and balanced processing components of authentic leadership explained 44.134% of total variance as a whole. On the other hand, relational transparency component explained 8.714% and finally internalized moral perspective component explained 6.786% of total variance.

Because authentic leadership scale is new for Turkish culture, we conducted confirmatory factor analysis to examine and decide the best latent variable structure. We tested three different models. In the first model, consistent with explanatory factor analysis results, the observed variables are loaded on three correlated latent variables. In the second model, consistent with the 4-factor higher order model of authentic leadership as described in literature, the observed variables are loaded on four correlated latent variables. Lastly, in third model, the observed variables are loaded on the higher order latent authentic leadership variable. Last model represented the best fit to our data (χ^2=220.71; df =93; χ^2/df =2.37; CFI=.98, RMSEA=.07). The CFA fit statistics of variables in the hypothesized model are represented in Table 2.

Table 2. The CFA fit statistics of the study variables.

	Structure	χ^2	df	χ^2/df	$\Delta\chi^2$	CFI	RMSEA
Authentic leadership	Three-factor model	270.33**	98	2.76	-	.97	.08
	First-order factor model	262.65**	96	2.73	7.68**	.97	.08
	Second-order factor model	220.71**	93	2.37	49.62**	.98	.07
Well-being at work	One-factor model	21.26	9	2.36	-	.99	.07
Collective efficacy	One-factor model	35.07	23	1.52	-	.99	.04

**p < .01 (two-tailed) ; the $\Delta\chi^2$ is in relation to three-factor model.

CFI = comparative fit index; RMSEA = root mean square error of approximation.

Confirmatory factor analysis results of authentic leadership illustrate that the best fitting model is the second-order factor model. This result is congruent with prior work (Kernis, 2003; Kernis & Goldman, 2005; Walumbwa et al., 2008; Walumbwa et al., 2010) that suggest four components of authentic leadership as an indicator of a higher order latent construct. Fundamentally, these four components embody the different aspects of authentic leadership, each of them is unique and highligts different characteristics of an authentic leader. On the other hand, prior research put forth that there are similarities and conceptual overlaps among them. Our data set also proved the overlap among self-awareness and balanced processing components of authentic leadership. As a result, authentic leadership is recognized as a second-order construct comprising of four components.

Prior to testing hypotheses, a confirmatory factor analysis for the proposed three-factor model, including authentic leadership, well-being at work and collective efficacy is conducted. The fit indexes represent a very good fit to the data (χ^2=773.07; df =417; χ^2/df =1.85; CFI=.98, RMSEA=.05).

4.2 Descriptive Statistics and Correlations

Means, reliabilities, standard deviations and correlations of the study variables are displayed in Table 3.

Table 3. Means, reliabilities, standard deviations and correlations

Variable	Mean	Std.Dev.	1	2	3
1. Authentic Leadership	2.65	.67	(.912)		
2. Well-being at work	2.71	.71	.436**	(.841)	
3. Collective Efficacy	3.83	.88	.385**	.371**	(.968)

** p< .01 (two-tailed)

* p< .05 (two-tailed)

Croanbach alpha reliabilities appear in the parantheses.

4.3 Hypotheses Testing and Findings

Hypotheses are tested using structural equation modeling (SEM) with maximum likelihood estimation in LİSREL 8.70. Table 4 presents the SEM results testing both the direct effects of authentic leadership and collective efficacy on well-being at work (Model 1) and the mediating effects of collective efficacy (Model 2).

Table 4. Path analysis results of direct effects and mediating effect.

Hypotheses	Model 1 Direct effects			Model 2 Mediation effect		
	Path Coefficients	t values	R^2	Path Coefficients	t values	R^2
H$_1$: AL → WB	0.55**	(7.50)	0.30	0.40**	(5.41)	0.28
H$_2$: AL → CE	0.45**	(7.22)	0.20	0.44**	(6.93)	0.19
H$_3$: CE → WB				0.30**	(4.34)	0.35
χ^2	784.30			763.54		
df	417			416		
χ^2/df	1.88			1.83		
GFI	.85			.85		
AGFI	.82			.82		
NFI	.95			.96		
CFI	.98			.98		
RMSEA	.056			.055		

AL= Authentic Leadership; WB= Well-being at Work; CE= Collective Efficacy

t values are placed in the parantheses.

** p< .01

* p< .05

Hypothesis 1 predicts that authentic leadership will be positively related to well-being at work. The SEM results show that authentic leadership significantly predicts well-being at work (ß=0.55, p<0,01; Model 1). Hypothesis 2 predicts that authentic leadership will be positively related to collective efficacy. The results reveal that authentic leadership significantly predicts collective efficacy (ß=0.45, p<0,01; Model 1). Hypothesis 3 predicts that collective efficacy will mediate the relationship between authentic leadership and well-being at work.

We implemented the four-step procedures for mediation defined by Kenny et al. (1998). According to Kenny et al. (1998) before testing the mediating role of a variable, it must be explored if there is a significant relationship between (1) the independent variable and meditor, (2) the mediator and dependent variable. If those relationships are not significant, then it can be said that there is no evidence for mediation.

In Step 1, authentic leadership must be related to well being at work. This condition is supported by the resuts of Hypothesis 1. In step 2, authentic leadership must be related to collective efficacy. This requirement is supported by the results of Hypothesis 2. In step 3, collective efficacy must be related to well-being at work. This requirement is explored by the results of Model 2. Lastly, in Step 4 authentic leadership and collective efficacy are included in the same model.

The SEM results of Model 2, put forth that collective efficacy is related to well-being at work positively (ß=0.30, p<0,01; Model 2). However, the effect of authentic leadership on well-being at work decreased to ß=0.40** from ß=0.55**. On the other hand, authentic leadership effect on well-being at work is still significant (p<0,01). Thus, Hypothesis 3 is also supported. In light of these findings, we can say that collective efficacy partially mediates the relationship between authentic leadership and well-being at work.

The structural equation model with standardized solution estimates is shown in Figure 2. As can be seen from both Table 4 and Figure 2, authentic leadership has significant influence on followers' well being at work and collective efficacy. So a follower who perceives his leader as authentic, will probably feel positive emotions more frequently and have high levels of self confidence, optimism, hope with the belief in being successful. On the other hand, collective efficacy also has significant influence on well-being at work. Of course, any one will feel more calm, contented, relaxed, cheerful, enthusiastic and optimistic at work associated with the extent to which he/she believes in the competencies of his/her group. Beside this influence, collective efficacy partially mediates the relationship between autentic leadership and well-being at work. This provides an opportunity for leaders to enhance their followers' well-being at work together with the practices of their applied leadership approach.
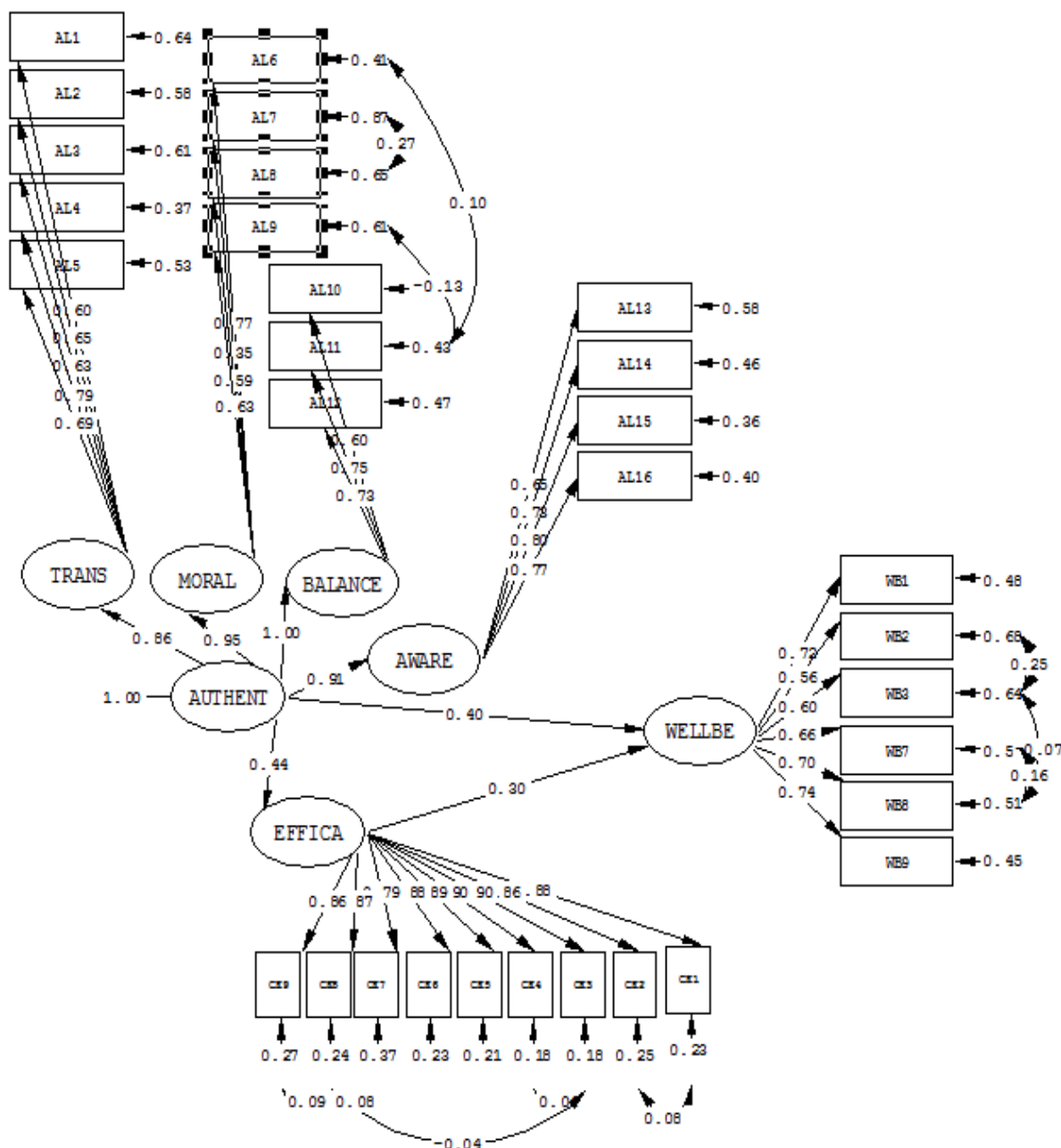

Figure 2. Hypothesized Model with Standardized Solution Estimates

5. Discussion and Implications

Leadership is a crucial phenomenon for organizations. But, if it is deprived of processes that relate it to the desired employee attitudes and behaviors, leadership can not be sufficient to achieve organizational goals. In this study, the frequency of positive emotions felt by employees at work, and the followers beliefs in their abilities and competences are held as the critical processes that relate authentic leader behavior to positive organizational outputs.

The discussion of implications of findings and the limitations of the study are below.

5.1 Theoretical and Practical Implications

One of the desirable follower outcomes posited to arise from authentic leadership is follower well-being. Different from prior work, in this study well-being at work construct is held as a mechanism that triggers desirable follower attitudes and behaviors depending on the followers' mutual interaction with the leader and the extent to which he/she perceives the leader as authentic. From this point of view, well-being at work relates authentic leadership behavior influences to positive consequences for the benefit of the organization such as, organizational commitment, organizational citizenship behavior, veritable and sustainable follower performance, decreased levels of turnover.

Furthermore, collective efficacy -an important concept for organizations inwhich tasks are performed by groups, has been proposed as a mediator in the relationship between authentic leadership and well-being at work. Walumbwa et al. (2004), empirically proved the partially mediating effect of collective efficacy in the relationship between leadership and work outcomes. According to that finding, they have suggested that leadership may affect work-related outcomes through various mechanisms. This suggestion is a foundation for the main propose of the present study. This study is proposed to develop a clear comprehension on the possible means through which an authentic leader influences his/her followers.

The results reveal that authentic leadership is an antecedent of collective efficacy and well being at work, furthermore collective efficacy mediates the relationship between authentic leadership and well-being at work. These findings demonstrate that leaders who are perceived as more authentic may have the advantage of developing followers' well being at work and collective efficacy for the utility of both organizations and followers.

Prior research in the field of authentic leadership is mainly theoretical. One of the contribution of this study in authentic leadership literature is the empirical demonstration of the relationships between the variables. Another contribution of the present study lies in including collective efficacy and well-being at work concepts to explain how an authentic leader may influence his/her followers. Some earlier work (Gardner et al., 2005; Ilies et al., 2005), theoretically predicts authentic leadership to enhance followers' well-being. However this relation has not been empirically proved previously. The findings of present study not only supports these predictions but also put forth collective efficacy as one of the probable intervening variables that can be used to strengthen this proved link between authentic leadership and well-being at work.

Results of this study are particularly important in organizations operating in labour-intensive sectors with professional or skilled labour as construction organizations. The results indicate that leaders may pay attention to be aware of their strengths; how followers perceive them or how themselves as being the leader impact followers. Leaders must also build open and trust-based relationships that encourage followers to give voice to their opinions; set a standard for moral business administration; evaluate different views before decision making in order to make followers feel more calm, contented, relaxed, cheerful, enthusiastic and optimistic at work, and consequently enhance followers' commitment, satisfaction and many other work related positive outcomes.

As a consequence, the results of this study suggest that the level of followers' well-being at work can be explained by the degree to which the followers perceive their leader as authentic and authentic leaders can take advantage of supporting collective efficacy of their followers in promoting followers' well-being at work.

Results of this study are particularly important in organizations operating in labour-intensive sectors with professional or skilled labour as construction organizations. The results indicate that leaders may pay attention to enhance employees' level of collective efficacy in order to heighten their well-being at work. Authentic leadership practices such as trust based relationship building, empowerment, frank communication and fairness, openly sharing information required in decision making, ethical conduct in business administration, strength based approach, transparency in relationships make the followers feel more calm, contented, relaxed, cheerful, enthusiastic and optimistic at work, and consequently enhance the followers' work related positive attitudes and behaviors.

On the other hand, in accordance with the increase in the level of work related positive attitudes and behaviors, the level of negative work attitudes and behaviors such as absence, being late to work or intention to leave will decrease (Mathieu & Zajac, 1990). For leaders to achieve decreased levels of turnover of skilled labour will be beneficial for the organization (Dailey & Kirk, 1992) while high levels of turnover will cause new and additional costs such as the costs

of training unskilled labour, latency of the project completion date.

5.2 Limitations and Future Research

A limitation of this study is that we collected data from the same source by a self-report survey. This implementation may cause defective findings because of common method/source variance. Future research should collect data from different sources.

In this study, some empirical evidence are attempted to put forth an emphasis on the importance and compatibility of the authentic leadership approach and well-being at work to the construction industry sector according to the sector's characteristics and necessities. The relations among three variables are explored only in İstanbul and in construction sector. Therefore, the data should be collected from other sectors to enhance generalizability of the findings in other settings.

The mediating effect of collective efficacy should be explored in teams, especially football, basketball or other teams that necessitate team work skills. Researchers may further investigate the mediating effects of collective efficacy and well-being at work in relationships between other leadership theories and other work related outcomes.

Finally, future studies could be conducted to find out other variables that may mediate the relationship between authentic leadership and positive work related outcomes.

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