# **Authentic Leadership and Employee Well-Being: The Mediating Role of Attachment Insecurity**

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**Abstract** The purpose of this study was to investigate the relationship between authentic leadership and the three dimensions of employee well-being (job satisfaction, perceived work stress, and stress symptoms). Furthermore, attachment insecurity was considered as a mediating factor between authentic leadership and the three dimensions of employee well-being. Data were obtained from a field sample of 212 health care providers with patient contact at five hospitals in the North East of Iran. Initially, collected data were analyzed with multiple confirmatory factor analyses. Then, structural equation modeling was applied to test proposed hypotheses. First, it was shown that authentic leadership negatively impacted attachment insecurity. Second, attachment insecurity proved to be a factor impinging upon job satisfaction. On the contrary, higher levels of attachment insecurity was associated with higher levels of perceived stress and stress symptoms. Third, it was revealed that attachment insecurity partially mediated the relationship between authentic leadership and job satisfaction and fully mediated the relationship between authentic leadership, perceived stress, and stress symptoms. According to the literature of authentic leadership, this is one of the first research studies, and literally the first in the East exploring the effects of authentic leadership on the exclusive combination of dimensions offered in this paper. Moreover, researchers in the field of management have not delved enough into attachment and its antecedents and consequences in leader-follower relationship. This is

tionship between authentic leadership, attachment security and employee well-being. As a further analysis, the final model was separately put under the two different lens of gender (female and male) and some interesting findings were discussed in the discussion.

one of the first studies to provide evidence of the rela-

**Keywords** Authentic leadership · Attachment insecurity · Employee well-being · Job satisfaction · Stress

#### Introduction

Some notorious cases of human rights abuse happening in different parts of the world are strangling trust in relationships which is essential for the development of secure, intimate, and satisfactory relationship. The recent economic crisis and other disasters such as the oil spill in the Gulf of Mexico, the nuclear disaster in Japan have attracted researchers' attention toward leaders who do not deny responsibility, hide information, and deceive others, but rather lead with authenticity and integrity (Peus et al. 2012). Authentic leaders "act in accordance with deep personal values and convictions, to build credibility and win the respect and trust of followers" (Avolio et al. 2004, p. 806) and genuinely have the penchant to serve others through their leadership (George 2003).

Attachment theory (Bowlby 1965) has been extensively applied within the psychology literature in order to investigate the effects of some factors including, relationship quality (Collins and Read 1990), self-esteem (Bylsma et al. 1997), distress (Wei et al. 2005), and well-being (Mikulincer and Shaver 2007; Leak and Cooney 2001; LaGuardia et al. 2000) in relationships. The birthplace of attachment theory is children psychology; however, scholars extended

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it to adolescent and adult psychological and social life. Although this theory, as a "grand theory", has received much attention in personality research, it has received scant attention from researchers investigating the role of individual differences at workplace (Harms 2011). As a piece of evidence, there is no trace of attachment theory in introductory textbooks of organizational behavior and human resource management (Harm 2011). Admittedly, there is little research exploring the nature of subordinates' attachment to their leaders (Molero et al. 2013).

Attachment theory is based on the seminal work of Bowlby (1982), aiming to promote an understanding of the bonds formed in close relationships. It postulates that this "from the cradle to the grave" (Bowlby 1982) desire seeks proximity to others in times of need or distress in order to enhance individuals' survival prospect. Succeeding in gaining proximity is the condition to develop a sense of security. He contended the tendency to establish special nexus with certain people (based on attachment behavioral system) is because of a lifelong motivational system functioning more robustly early in life that is shown in thoughts and behaviors pertaining to proximity and support seeking from attachment figures (Mayseless 2010; Mayseless and Popper 2007; Popper and Mayseless 2003). What followed was the inception of Freud (1939, 1961)'s idea that leaders are like proxy father-figures and researchers have speculated as to the relationship between parent-child relationships and those between leaders and their followers. Since then, several theoretical reviews have tried to link attachment styles and childhood experiences with leader perceptions (e.g., Kahn and Kram 1994; Keller 2003) and leader performance outcomes (Avolio 1994; Breshanan and Mitroff 2007; Keller 2003). The logic of the attachment system as an antecedent of leadership outcomes is based on the idea that attachment relationships are shaped with individuals that one is close to, who can provide a safe haven in times of stress, and who can be relied on to encourage and support exploration and new experiences (Fraley and Shaver 2000).

The processes of authentic leadership positively influence self-awareness and self-regulated positive behaviors on the part of both leaders and followers, and it provokes positive personal growth and self-development. The increased levels of disclosure and interpersonal trust make it likely that secure attachment would be linked with authentic leadership (Avolio and Gardner 2005). Authenticity has a substantial influence on how one lives one's life; moreover, authenticity not only impacts leader's own well-being, but also influences their followers' well-being and self-concept (Ilies et al. 2005).

The current approach toward authentic leadership (cf. Gardner et al. 2005a, b) and related empirical research (Dickson et al. 2001; Shirazi and Sharifirad 2013)

corroborates the role authentic leaders can play in creating positive ethical climate and sustainable follower accomplishment through the development of authentic leaders and authentic follower. Research has demonstrated that two proposed sub-constructs of ethical climate—caring climate and independence climate—had a negative association with both acquiescent silence and defensive silence which injects perceived organizational support that reduces role stress and job insecurity (Rhoades and Eisenberger 2002). Looking through a different lens, ethical climate (Walumbwa et al. 2008) embedded in the definitions of authentic leadership is shown to be play a key role associated with higher LMX. This ambience can highly impact the interrelationship between leaders and followers and inculcate safety in relations.

Prior research has revealed that employee well-being is affected not only by the physical work environment, but also the psychosocial work environment (e.g., Gilbreath and Benson 2004). In a study by Sparks et al. (2001), management style was shown to be one of the four main psychosocial work environment issues that are of concern for employee well-being and occupational health in the 21st century workplace. Supervisors are considered as the main role players because they can have an enormous effect, positive or negative, on employee's lives because supervisors significantly influence work demand, control and social support (e.g., Gilbreath and Benson 2004; Harris and Kacmar 2006).

Since there are very few studies exploring the effects of authentic leadership on followers' well-being in eastern contexts, and also attachment insecurity has not received enough attention from management researchers, the objectives of this study are threefold. First of all, it is intended to examine the effects of authentic leadership on employees' well-being. Also, the mediating roles of followers' attachment insecurity are investigated, and finally the impact of authentic leadership on attachment insecurity is explored.

## **Theoretical Background**

Employee Well-Being

According to the available literature, well-being ranges from a simple one such as feeling good or feeling bad (Warr 2006) to a multi-construct one such as containing objective list, preference satisfaction and mental states (Parfit 1984). In a narrower sense, employee well-being is simply defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke 1969). Some researchers are of the opinion that it comprises some psychological indicators such as



affect, anxiety, and frustration and psychological ones such as blood pressure and heart condition and general physical health (e.g., Danna and Griffin 1999). It includes various concepts of physical and psychological health. We can distinguish between two conceptualizations of well-being: subjective and psychological (Keyes et al. 2002).

Studies investigating subjective well-being have focused on both affective (hedonic balance; balance between pleasant and unpleasant affect) and cognitive (job satisfaction) components of well-being (e.g., Schimmack et al. 2002). Studies investigating psychological well-being draw on various conceptualizations of mental health (Keyes et al. 2002). There is also a distinction between contextfree well-being (e.g., generalized psychosomatic complaints) and context-specific well-being (e.g., job satisfaction; Grebner et al. 2005; Warr 1999). More generally, recent contributors to the field of occupational health (e.g., Hofmann and Tetrick 2003; Snyder and Lopez 2002) have argued that well-being goes beyond the absence of ill health to include the presence of positive states. A new facet of well-being called social well-being, referring to the quality of one's relationship with other people and communities, was proposed (Keyes 1998). The distinction between social well-being and two other kinds of wellbeing (i.e., psychological and physical well-being) is the emphasis on society and social interactions (Bradbury and Lichtenstein 2000).

According to the literature of well-being, affective wellbeing is the core dimension of employee well-being, since the literature usually construes well-being as a primarily affective state (Diener et al. 1999). More recently, Liu et al. (2010) mentioned that affective well-being can be categorized under psychological well-being. There are different studies just considered affective well-being (e.g., Van Horn et al. 2004). In the current research, different aspects of individual employee's well-being are considered. These facets are positive affective well-being (job satisfaction), which refers to a pleasurable emotional state resulting from the overall appraisal of one's job or the organization (Siu 2002); negative affective well-being (perceived work stress), experiencing few unpleasant emotions and moods; and physiological well-being (stress symptoms). In this research, three facets of job satisfaction, perceived work stress and stress symptoms are considered.

## Authentic Leadership and Employee Well-Being

The concept of authenticity has roots in Greek philosophy ("To thine own self to be true"). This concept attracted much attention of mid-20th century researchers in "humanistic psychologists" such as Rogers (1951, 1959, 1961) and Maslow (1968, 1970, 1971), who believed it is a crucial factor to the development of what Rogers called a

fully functioning person and Maslow called self-actualization. In recent years, "positive psychology" (Seligman 2002) has been highlighted as an important role of humanistic psychology, significantly enhanced by contemporary empirical methods, the concept of authenticity undergone revival by researchers (e.g., Johnson et al. 2004; Kernis and Goldman 2006).

Evidence from different studies has substantiated the fundamental role of authenticity in well-being (Horney 1951; Rogers 1961; Winnicott 1965; Yalom 1980) not only for leaders' own well-being, but also their followers' wellbeing and self-concept (Illies et al. 2005). Recent theoretical discussions of the moral and ethical basis of organizational leadership have reached the consensus confirming the essence of all positive approaches to leadership (Luthans and Avolio 2003; May et al. 2003). The consequence of their concerted effort has been the concept of authentic leadership, which is believed to be the root concept for positive leadership approaches such as charismatic, transformational, and ethical leadership (Avolio and Gardner 2005; Avolio and Mhatre 2012). Walumbwa et al. (2008) define authentic leadership as a "pattern of leader behavior that draws upon and promotes both positive psychological capabilities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development." (p. 94) Authentic leaders are known as those who are deeply aware of their values and beliefs, self-confidant, genuine, reliable and trustworthy, concerned about building follower's strengths, broadening their thinking and creating a positive and engaging organizational context (Avolio and Gardner 2005; Gardner et al. 2005a, b). Furthermore, Luthans and Avolio (2003, p. 243) stated that the "authentic leader is confident, hopeful, optimistic, resilient, moral/ethical, future oriented, and gives priority to developing associates to be leaders. The authentic leader is true to himself/herself".

Getting aware of the limitations of the charismatic and transformational leadership, some researchers (e.g., Avolio and Gibbons 1988; Bass and Steidlmeier 1999; Howell and Avolio 1993) recognized some leaders use charismatic or other transformational leadership behaviors to manipulate followers to reach their self-serving interests. Going beyond, Luthans and Avolio (2003) initiated formalizing a theory of authentic leadership. Based on their conceptualization, Gardner et al. (2005a, b), and Ilies et al. (2005) presented more complex models of authentic leadership. They argued that such leaders, through supporting self-determination and psychological engagement (Kahn 1990), would positively impact employee attitudes and behaviors such as citizenship behavior, commitment, performance, and well-being.



Walumbwa et al. (2008) proposed a four-factor construct for authentic leadership. The multi-factor conceptualization includes self-awareness (referring to the extent a leader possesses accurate self-knowledge and uses that knowledge to demonstrate he or she is cognizant of his or her impact on others); relational transparency (showing a leader's presentation of their true thoughts and emotions in an open and transparent manner versus being fake or manipulative); balanced processing (presenting a leader's ability and propensity to objectively consider and analyze all relevant information before making leadership decisions); internalized moral perspective (demonstrating that a leader's self-regulation is guided by internal moral values).

Although direct empirical evidence of the relationship between authentic leadership and follower job satisfaction is far absent (Walumbwa et al. 2008), theory proposes that authentic leadership should be positively related to job satisfaction (Gardner et al. 2005a, b). For example, Ilies et al. (2005) suggested that authentic leaders are likely to have a positive impact on followers' behaviors since such leaders provide support for followers' self-determination. Research has revealed that leaders who engage in such behaviors are more effective at enhancing intrinsic worker motivation (Deci et al. 1989), which should cause higher follower job satisfaction and performance. In a study at hospitals, Giallonardo et al. (2010) revealed that there is a positive relationship between authentic leadership of nurse preceptors and the job satisfaction of new graduate nurses in acute care hospitals. In the same vein, Gardner et al. (2005a, b) used self-determination theory (Ryan and Deci 2001) to predict that positive modeling by authentic leaders would foster internalized regulation processes among followers, which have in turn been shown to contribute to elevated levels of follower well-being, engagement, and performance (Deci et al. 1989; Harter et al. 2002).

In a review of resource theories in psychology, Hobfall (2002, p. 307) defined resources as "those entities that either are centrally valued in their own rights (e.g., selfesteem, close attachments, health, and inner peace) or act as a means to acquire centrally valued ends (e.g., money, social support, and credit)." Lyubomirsky et al. (2005) postulate that these resources along with attributes and skills help people thrive and succeed at work, in relationship and, with health. Moreover, experimental studies have revealed that those induced into a state report higher selfperceptions such as efficacy (Barron 1990; Schuettler and Kiviniemi 2006), have optimistic expectations (Brown 1984), and set higher goals for themselves (Baron 1990; Hom and Arbuckle 1988). Conceptualizing positive capacities (e.g., authenticity and attachment security) as sources from which one can draw seems an important theoretical explanation of the mechanism by which such positive capacities impact one's well-being.

In the most recent study, Leroy et al. (2012), through self-determination theory (e.g., Ryan and Deci 2001), demonstrated that authentic leadership can lead to authentic followership. Gardner and his colleagues, as proponents, believe authentic leadership describes a form of leadership that originates from authentic functioning but, as a process of influence, is also aimed at the development of followers and, more specifically, serves to more authentic followership (Gardner et al. 2005a, b). Bearing two points in mind, first, there is a positive relationship between authentic leadership and authentic followership; second, conservation of resources theory (COR, Hobfoll and Freedy 1993) provide a theoretical explanation for whether, and most importantly when lack of authenticity as a resource leads to work stress and health issues, it is concluded that leader's authenticity can elevate follower's authenticity which alleviates work stress. Neff and Harter (2002) surveyed people subordinated their needs in close relationships to avoid confrontation, accepting external influence. Those who subjectively felt inauthenticity reported lower levels of self-esteem and more depression. Lopez and Rice (2006) revealed the positive relationship between authenticity and relationship satisfaction.

Social psychology research has depicted the extent to which people feel their personality varies between roles is related to their levels of well-being, with less role variation being correlated with higher well-being (e.g., Roberts and Donahue 1994). There is a negative correlation between the feelings of authenticity and anxiety, stress, and depression, and a positive correlation with self-esteem, and this partially mediated the relationship between role variability and well-being. In a related study, Bettencourt and Sheldon (2001) demonstrated that subjective authenticity in different roles was related to both SWB and group connectedness, and this correlation persisted when these variables were measured via the peer report of a group member. According to the above-mentioned points; therefore,

**H1a** Those followers perceiving their leaders as authentic are more likely to feel more job satisfaction.

**H1b** The followers perceiving their leaders as authentic are less likely to feel job stress.

**H1c** Those followers perceiving their leaders are authentic are less likely to show stress symptoms.

The Mediating Role of Attachment Insecurity

The first research done in the literature of attachment had the focal point of how children experience a sense of security in relationships with their primary caregivers. Bowlby (1969/1982) contended that human beings are born with an innate but adaptable motivational system



selectively designed to promote safety by inducing need to seek proximity to attachment figures, especially in response to threat. The theory of attachment extended to relationships throughout the lifespan (Hazan and Shaver 1987). Based on this theory, most researchers agree that the attachment system varies along two distinct dimensions of anxiety and avoidance (e.g., Simpson et al. 1996).

Attachment anxiety is marked by fears of rejection or abandonment and doubts about one's value to other people. It is associated with a variety of mental health problems (e.g., depression and stress, Selcuk and Gillath 2009; Mikulincer and Shaver 2007) and negative emotions in close relationships (e.g., anger, jealousy; see Mikulincer and Shaver 2007, for a review). On the flip side, avoidant attachment is marked by discomfort with closeness and reluctance to depend on relationship partners, based developmentally on experiences with unsupportive attachment figures. It is associated with negative views of relationship with partners, unwillingness to disclose feelings of partners, reluctance to seek and provide help, and low relationship satisfaction, trust, and commitment (Mikulincer and Shaver 2007). Individuals experiencing a higher level of anxious attachment have been found to appraise stressful situations as more threatening, to have a low stress-resistant attitude and to use emotion-focused coping through concentrating their attention on their own distress (Birnbaum et al. 1997; Mikulincer and Shaver 2007), suggesting higher levels of stress. Although findings are less convergent about the impact of avoidant attachment on well-being, most studies have revealed that those with high levels of avoidant attachment appraise stressful situations as threatening, but also appraise themselves as eligible people to cope with stressors. As an example, Besser and Priel (2008) demonstrated that insecurely attached inability to harness social support contributes to negative health outcomes. In the same vein, Brunette et al. (2009a, b) suggested that insecurely-attached individuals' responses to interpersonal offenses could contribute to depressive symptoms.

Although there is a plethora of studies associated with parent–child relationships (cross-sectional and longitudinal), there are very few studies exploring the effects of attachment insecurity on leaders–follower dyadic relationships. Since providing support and encouraging autonomy are the two predispositions of follower about the leaders, it can be anticipated that followers will have a tendency toward establishing attachment relationships with their leaders (Keller 2003). Research has shown that those followers also reported higher levels of job satisfaction (De Sanctis and Karantzas 2008). In a broad survey of the workplace, Hazan and Shaver (1990) found that securely attached individuals reported significantly higher satisfaction with most aspects of their workplace (e.g., coworkers,

job security, recognition, etc.). Secure individuals were also less likely to report hostile outbursts in the workplace, were less prone to psychosomatic illnesses, and less susceptible to experiencing actual physical illnesses (Hazan and Shaver 1990). Similarly, in a sample consisting mostly of computer software workers, securely attached individuals reported higher levels of work satisfaction and various aspects of their jobs (Krauz et al. 2001). Likewise, in a large sample of university employees, securely attached individuals reported higher levels of job satisfaction while anxiously attached individuals reported significantly lower levels of job satisfaction (Sumer and Knight 2001). Nurses with insecure attachment styles reported less hope and those with avoidant attachment reported being less healthy. Joplin et al. (1999) found similar results in a sample of students who worked full time. Individuals with higher levels of avoidant attachment reported experiencing psychological problems in addition to insomnia and social dysfunction. Individuals higher on anxious attachment reported poorer physical health along with somatic symptoms, insomnia, and social dysfunction. Securely attached individuals were less likely to report social dysfunctions, but did not report significantly less psychological and physical problems. In terms of burnout in the workplace, Ronen and Mikulincer (2009) found strong relationships with insecure attachment in a large sample of working adults. We thus propose the following hypothesis:

**Hypothesis 2a** Higher levels of attachment insecurity are likely to cause less job satisfaction.

**Hypothesis 2a** Higher levels of attachment insecurity are expected to increase perceived work stress.

**Hypothesis 2c** Higher levels of attachment insecurity are likely to increase stress symptoms.

Authentic leadership can have the ability to impact the development and maintenance of exchange relationships with followers (Wang et al. 2014). The components of selfawareness, balanced processing, internalized moral perspective, and relational transparency together show the integrity, respectability, and trustworthiness of authentic leaders (Illies et al. 2005). These characteristics build the key features of high-quality exchange relationships (e.g., Avolio et al. 2004; Illies et al. 2005). By eliciting different viewpoints from followers, authentic leaders are viewed as respectful and trustful to their followers. This gesture is likely to be reciprocated by respect and trust on the part of followers (Avolio et al. 2004). Moreover, authentic leaders share information with their followers in an open and transparent manner, that is, they transparently convey their attributes, values, aspirations, and weakness to followers, and encourage them to do likewise, thus fostering trust and intimacy with followers (Avolio et al. 2004). To conclude,



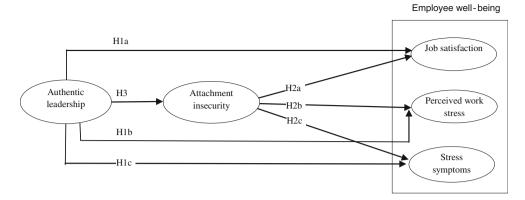


Fig. 1 proposed research model in the current study

authentic leaders are likely to decrease follower's insecurity through developing positive social exchanges with their followers.

**H3** Perceived authentic leadership by followers is likely to decrease attachment insecurity.

With regard to leadership styles and behaviors, attachment has been shown to be linked to a variety of outcomes. For example, secure attachment has been linked with a relational (as opposed to task) leadership style applying Fiedler's Least Preferred Coworker Scale (Doverspike et al. 1997). They also showed that avoidant attachment was associated with a tendency toward task-oriented leadership. In a study of officers (Davidovitz et al. 2007), both insecure styles of attachment in leaders were associated with followers reporting that their own performance was poorer. Over time, the followers of leaders with higher levels of avoidant attachment tended to show decreases in mental health as well. In a related study, Nelson and Quick (1991) found that the presence of a supervisor as a source of social support for newcomers in organizations was a significant determinant of psychological distress symptoms. More recently, Ronen and Mikulincer (2009) have demonstrated that both leaders and followers' attachment insecurity contribute to followers' burnout and job satisfaction.

**H4** Attachment insecurity is a mediator between authentic leadership and employee well-being.

The conceptual model proposed in this research study is shown in Fig. 1.

#### Method

Health care providers with patient contact at 5 hospitals in the North East of Iran were invited to participate in the study. Out of approximately 352 questionnaires, 212 returned completed surveys (overall response rate of 60.2 %). This sample was 55 % female, with a mean age of 30.21 years [standard deviation (SD) = 8.54] and average job tenure of 6.44 years (SD = 6.72). Out of the 212 participants, 67.2 % were nurses, 32.8 % medical professionals (e.g., surgeons, and physicians).

We distributed the survey in paper-and-pencil format during unit meetings. Completed paper-and-pencil surveys were returned to the corresponding author in person. Time was allocated for staff to complete the surveys during work hours.

#### Measures

The survey included measures of authentic leadership, anxiety attachment, avoidance attachment, job satisfaction, perceived work stress, and stress symptoms. The means, standard deviations, correlations, and internal consistency reliabilities (Cronbach's alpha) for all scales used are reported in Table 1.

## Authentic Leadership

We used the 16-item Authentic Leadership inventory (ALI) developed and validated by Neider and Schriesheim (2011) to measure authentic leadership. This scale showed high content, convergent, and discriminant validity. Followers were asked to rate the frequency of authentic leadership behaviors exhibited by the leader on a 5-point Likert-type scale, using anchors ranging from never to almost always. Sample items include "My supervisor solicits feedback for improving his/her dealings with others" (self-awareness), "My supervisor encourages others to voice opposing points of views" (balanced processing), "My supervisor clearly states what he/she means" (relational transparency), and "My supervisor shows consistency between his/her beliefs and action" (internalized moral perspective). Confirmatory factor analysis indicated a satisfactory fit ( $\chi^2$  [90] = 166.44, CFI = 0.93, TLI = 0.92, RMSEA = 0.08). The



Table 1 Means, standard deviations, and correlations among variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.508	0.50	-								
2. Education	2.22	0.97	-0.25**	_							
3. Age	2.92	0.92	-0.26**	0.63**	_						
4. Tenure	1.98	1.06	0.03	0.13	-0.01	_					
5. Authentic leadership	3.11	0.57	-0.14	-0.16	-0.13	-0.00	0.91				
6. Attachment insecurity	3.14	0.59	0.03	-0.17	-0.24**	-0.01	-0.39**	0.88			
7. Job satisfaction	3.79	0.99	-0.09	-0.03	0.02	0.00	0.52**	-0.33**	0.84		
8. Perceived stress	3.14	0.86	0.18	-0.08	-0.08	0.09	-0.24**	0.38**	-0.38**	0.87	
9. Stress symptoms	2.62	1.05	0.17	-0.05	-0.09	0.08	-0.23*	0.36**	-0.32**	0.56**	0.92

n = 272

Cronbach's alpha for the ALI obtained in our study was 0.91.

#### Attachment Insecurity

The two sub-dimensions of anxiety attachment and avoidant attachment were measured by the 36-item scale of close relationships inventory (ECR; Brennan et al. 1998). Participants rated the extent to which each item described their feelings in close relationships on a 5-point scale ranging from "not at all" (1) to "very much" (5). Because this research focuses on relationships at workplace, the questions were modified to suit the context. Sample items were "I worry that may supervisor won't care about me as much as I care about him/her" for anxiety attachment, and "I want to get close to my supervisor, but I keep pulling back" for avoidant attachment. Several items were reverse coded before scores of anxious and avoidant attachments were computed. Confirmatory factor analysis indicated a  $(\chi^2)$ [35] = 136.690, CFI = 0.92, satisfactory TLI = 0.90, RMSEA = 0.07). Cronbach's alphas for the current study were 0.88 for attachment insecurity items.

## Job Satisfaction

We used two items developed by Cammann et al. (1979) to measure job satisfaction. A sample item was, "All in all, I am satisfied with my job". The Cronbach's alpha of this scale was 0.84.

## Perceived Work Stress

We selected two items from prior study by Siu et al. (2007, 2006) to measure perceived work stress. The item was "I usually feel that I am under a lot of pressure". The Cronbach's alpha of this scale was 0.87.

Stress Symptoms

We selected six items from ASSET, an Organizational Stress Screening Tool (Cartwright and Cooper 2002) to measure stress symptoms. The items were symptoms of stress-induced ill-health such as headache and constant tiredness. Each item was rated on a 6-point scale ranging from 1 (never) to 6 (frequently). The Cronbach's alpha of this scale was 0.92.

### Results

Preliminary Analysis

Confirmatory Factor Analysis

In order to test the distinctiveness of the variables in this study, some CFAs were conducted to compare the fit of our hypothesized measurement model to a number of nested plausible alternative models. Due to the length of authentic leadership scale, the four dimensions were used as manifest indicators ("Parceling"; Kishton and Widaman 1994) of the latent authentic leadership factor. The same strategy was also utilized to the attachment insecurity scale, which was parceled as twelve indicators, and each indicator included three items which were randomly selected. Table 2 shows the results of the CFA that examined the distinctiveness of the study variables. As shown in Table 2, the fit indices revealed that the hypothesized six-factor measurement model was a better fit than any alternative nested models, showing support for the distinctiveness of the variables in the study.

Finally, discriminant validity is assessed with a variance-extracted test, where we compared the variance-extracted estimates for the two factors of interest with the



<sup>\*\*</sup>  $\rho < 0.01$ 

<sup>\*</sup>  $\rho < 0.05$ 

Table 2 Results of contemporary factor analysis for the measures of variables studied

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Model	$\chi^2$	df	TLI	CFI	RMSEAA
Five factor model	728.524	428	0.91	0.92	0.07
Four-factor model 1: perceived work stress and stress symptoms combined	1,812.85	429	0.88	0.89	0.12
Four-factor model 2: authentic leadership and attachment insecurity combined	2,012.11	432	0.78	0.81	0.16
Three-factor model 3: job satisfaction, perceived work stress and stress symptoms combined	2,312.89	431	0.66	0.72	0.23
Two-factor model 4: authentic leadership and attachment insecurity combined, and job satisfaction, perceived work stress and stress symptoms combined	3,025.51	434	0.52	0.66	0.32
One-factor model	4,452.32	434	0.41	0.48	0.51

TLI Tucker-Lewis index; CFI comparative fit index; RMSEA rootmean-square error of approximation

square of the correlation between the two factors. Discriminant validity is demonstrated if the variance-extracted estimates are greater than the corresponding squared correlation (Fornell and Larcker 1981; Netemeyer et al. 1990). Table 4 (in Appendix) shows all the variance-extracted estimates are greater than the corresponding squared correlations. Therefore, the above three tests fully support the discriminant and convergent validity of the five constructs tested in this study. Table 5 shows discriminant validity of the theoretical construct measures.

The common method variance problem should not be a concern for the interaction effect in this study because we obtained data from employees at different time periods. The use of similar methods to collect measures on criterion and predictor variables is not a source of spurious interactions (Aiken and West 1991; Evans 1985). In order to address possible concerns, we examined this CMV issue below (Podsakoff et al. 2003; Spector 2006). We used Harman's one-factor test to address the potential common method/source bias (Podsakoff et al. 2003). The basic assumption of this technique is that if a substantial amount of common method/source bias exists, either (a) a single-factor will emerge from the factor analysis, or (b) a general factor will account for the majority of the covariance

among the measures. Specifically, we conducted an exploratory factor analysis using a principal components extraction and a varimax rotation on the scales used in this study. Results indicated the presence of five factors with the first factor explaining only 33.21 % of the variance while the five factors in the total explained 81.12 % of the variance. Although this procedure did not completely rule out the possibility of same source bias, it is postulated that common method/source bias was not a serious problem in the current study. The fact that none of the fit indices for the single-factor measurement model approached acceptable levels (see Table 2) was also a strong support.

## Test of Hypotheses

In this research, structural equation modeling was employed using Amos, as software in the package of IBM SPSS Statistics 22 to analyze our data.

The correlations between authentic leadership and three variables of job satisfaction ( $r=0.52,\ P<0.01$ ), perceived work stress ( $r=-0.24,\ P<0.01$ ), and stress symptoms ( $r=-0.23,\ P<0.05$ ) provided preliminary evidence to support Hypotheses 1a, 1b and 1c. Supporting Hypothesis 3, authentic leadership had negative correlation with attachment insecurity ( $r=-0.39,\ P<0.01$ ). Also, as it is evident from Table 1, attachment security was significantly and negatively related to job satisfaction and positively to perceived work stress and stress symptoms. Thus, Hypotheses 2a and 2b as well as 2c were preliminarily supported.

Hypothesis 4 was tested through a series of nested models comparison (See Table 3). Model 1 represents a fully mediated model. We specified paths from authentic leadership to attachment insecurity and from attachment insecurity to different variables of employee well-being. All fit indices showed a fairly good fit  $\chi^2$  [431] = 785.22, CFI = 0.86, TLI = 0.85, RMSEA = 0.09).

Based on Model 1, we drew model 2 by adding paths from authentic leadership to job satisfaction, perceived work stress and stress symptoms. After evaluating the fit indices of the model ( $\chi^2$  [428] = 728.55, CFI = 0.90, TLI = 0.89, RMSEA = 0.07), which showed a good fit, we figured out that the path from authentic leadership to perceived stress and stress symptoms were not significant. So we tested model 3 based on Model 2 by deleting the direct path from authentic leadership to perceived stress and stress symptoms ( $\chi^2$  [430] = 735.40, CFI = 0.93, TLI = 0.92, RMSEA = 0.07). The difference between Chi squares was significant for model 1 compared with model 3 ( $\chi^2$  (2) = 12.12, P > 0.05). In summary, the results of model comparisons showed that Model 3 best fit our data. Figure 2 illustrates the final model.



Table 3	Hypothesis	testing
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p < 0.001

Hypothesis	Structural relation (Path)	Standardized path coefficient	Sig.	t value
H1a	AL → Job satisfaction	0.56*	0.00	8.12
H1b	AL → Perceived work stress	-0.12	0.40	0.12
H1c	AL → Stress symptoms	0.11	0.12	5.97
H2a	Attachment insecurity → Job satisfaction	-0.34*	0.00	9.12
H2b	Attachment insecurity → Perceived work stress	0.61*	0.00	6.23
H2c	Attachment insecurity → Stress symptoms	0.49*	0.00	11.47
Н3	AL → Attachment insecurity	-0.29*	0.00	5.22

O.56\*\*

Authentic leadership

Attachment insecurity

O.49\*\*

Attachment insecurity

O.49\*\*

Stress symptoms

Fig. 2 The path estimates of the final model

#### Discussion

According to several researchers (e.g., Mayseless and Popper 2007), the relationship between followers and leaders is analogous in critical ways to that of a child and his or her primary parental figure. Bearing it as a valid inference in mind, followers then should develop attachment to their leaders, and the quality, or security, of these attachments, should be impacted by perceptions of the leader's behavior (Popper and Mayseless 2003). In 2013, Sharifirad, in a similar context, revealed that transformational leadership had a significant positive relationship with employee well-being. However, very little research studied is dedicated to the relationship between authentic leadership and employee well-being. Since well-being is defined in different ways and measured with different tools, researchers have considered some types of well-being in relation to authentic leadership, for example eudemonic well-being (Ilies et al. 2005), and overlooked some others for instance subjective well-being. Also, the mechanism decreasing well-being in the relationship between authentic leaders and followers has not received enough attention.

The purpose of this study was to examine the relationship between authentic leadership and different proposed sub-constructs of employee well-being consisting of job satisfaction, perceived stress, and stress symptoms in an Iranian context through the mediating role of attachment insecurity. The results showed that authentic leadership has a positive impact on job satisfaction and does not have a direct influence on perceived stress and stress symptoms. Importantly, attachment insecurity of the followers fully mediated the relationship between authentic leadership and perceived stress as well as stress symptoms. Additionally, attachment insecurity has a partial mediation role between authentic leadership and job satisfaction.

This study has some theoretical contributions. First, it tried to bridge the gap addressed in Hrams's (2011) saying that there are a host of leadership styles that are completely unexplored, yet are good candidates to demonstrate significant relationships with attachment orientation. Since authentic leadership increases the level of trust and disclosure in the relationships between followers and leaders (Avolio and Gardner 2005), and also includes a positive moral perspective characterized by high ethical standards that guide decision making and behavior (Avolio and Gardner 2005; Luthans and Avolio 2003; May et al. 2003), the findings revealed that authentic leadership decreases attachment insecurity. Being committed to ethical standards



may reassure followers that in case of conflicts personal benefit, they do not metamorphose into self-serving leaders who ignore subordinates' rights. Leaders' transparency and commitment to morality increases trust among followers. Gradually, trust breeds security in interactions which in return minimizes stress and boosts job satisfaction.

Further investigation of the final model showed that authentic leadership negatively and significantly impact attachment anxiety (r = -0.28, P < 0.01), and attachment avoidance (r = -0.32, P < 0.01). This, in return, revealed that authentic leadership decreases attachment avoidance more than attachment avoidance. It is aligned with prior research showing that leaders' authenticity increases trust and, as a result, decreases avoidance attachment (Jensen and Luthans 2006; Avolio et al. 2004). In almost the same vein, Molero et al. (2013) showed that transformational leadership, as a kind of positive leadership, can negatively impact attachment anxiety and attachment avoidance, which both negatively impact organizational outcomes such as organizational identification, subordinates' satisfaction and perceived leader's efficacy.

Although this study, as rare research joining two realms of authentic leadership and attachment, empirically showed that leaders' authenticity decreases insecurity of followers in relationships, further research is deemed necessary to juxtapose the effects of authentic leadership's sub-constructs on two different types of attachment insecurity. The results can illuminate which behaviors and attitudes of leaders curtail insecurity in followers.

Attachment security has a wide range of positive impacts on emotional stability and social behavior (e.g., Gillath et al. 2008; Mikulincer and Shaver 2007). From one point of view, attachment security is known to reduce state insecurity (Hart et al. 2005) and from another perspective, leader's authenticity breeds self-determination and psychological engagement (Kahn 1990). This combination shapes a virtuous cycle of reciprocity and trust which can eventually lead to secure bonds between subordinates and leaders which are positive for both employees and organizations (Molero et al. 2013). What decreases in such relationships are perceived stress and stress symptoms and what is boosted is job satisfaction. Although prior research (e.g., Burnette et al. 2009a, b; Karreman and Vingerhoets 2012) has delved into the negative influence of attachment insecurity on depressive symptoms and psychological wellbeing, it has not viewed attachment security at workplace, between leaders and followers. This study, aligned with prior findings, purports that attachment insecurity is positively associated with stress symptoms and perceived stress and on the whole impinges on employee well-being.

The results also showed that attachment insecurity fully mediates the relationship between authentic leadership and two variables of well-being related to stress (perceived stress and stress symptoms), while only partially mediated the relationship between authentic leadership and job satisfaction. In this study, job satisfaction was conceptualized in terms of general job satisfaction, which refers to the aggregated evaluation of one's job and job experiences. Theoretically, job satisfaction can be dissected into satisfaction with supervisor, task, coworkers and pay and promotion. Therefore, leadership can directly impact follower's job satisfaction. In contrast, other aspects of task and well-being may not pertain to leader and supervisor.

Although it was not listed in our goal list, the effects of gender was considered and explored in our model. The final model was considered as the main model and the data were split for females and males. First of all, the goodness-to-fit indices were calculated for both models with male and female respondents. Our further analyses revealed that for female participants the relationship between authentic leadership and attachment insecurity was a great deal more positive than that of male ones (r = -0.53 vs. r = -0.14,P < 0.01). It implies that inauthenticity of leaders may cause female employees to feel more insecure. On the same avenue, it was found out that attachment insecurity for women had more dire consequences. Stress symptoms and perceived stress were more positively associate with felt insecurity (r = 0.49 and r = 0.28 for males and r = 0.58and r = 0.54 for females, respectively; P < 0.01). To summarize, female employees may be more susceptible to stress after experiencing lack of attachment security; moreover, more authenticity of leaders can elevate their security. However, it summons future research to consider gender differences at workplace as a factor that can contribute to more stress once lack of consistency occurs in the authenticity of leaders. The levels of job satisfaction through attachment insecurity and authentic leadership were almost the same for both genders. It might mean that although psychological aspects of authenticity may impact both genders equally; however, it may cause more negative physical and perceptive results for females than males. Rumination, as a class of conscious thoughts "that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts" (Martin and Tesser 1996, p.1) is bound to be a factor that increases the level of female susceptibility. Since stress is one of the most detrimental factors in organizational behavior for employees, considering dichotomous sexes and the strategies they use to combat stress should be a focal point and, in this respect, attachment insecurity and inauthenticity can be the starting points.

## Limitations

Despite the contributions of this study, there are some inherent limitations. First, single source self-reported data



are bound to biases. Applying self-reports was necessary, given the nature of many variables in this study. Some of the variables—such as job satisfaction, perceived stress and stress symptoms—represent internal psychological and physiological states. Thus, the most appropriate means to assess these variables is to directly ask for reports from the hospital staff who experience them. Second, this study was based on cross-sectional data and hence, as with crosssectional data in general, this precludes the determination of causality. This research was done through data collection at one point. It is contended the effects of authentic leadership and attachment insecurity on stress and its perception may form during time. Further longitudinal research considering the proposed model may give more robust findings. Third, the generalizability of the results needs a conservative insight. The data were obtained from health care units. The nature of this job context can have some impact on the relationships between the variables included. Fourth, as with any study, it is not possible to account for every variable that could influence the relationship between authentic leadership and employee wellbeing. Indeed, there may be variables that moderate the relationship between variables and also some other outcomes not explored yet. Last, the questionnaire used in this study for attachment insecurity was not originally designed for workplace contexts. A gap is felt regarding a reliable and valid questionnaire designed for workplace contexts. Also, only two dimensions of attachment security were considered. For instance, the Attachment Style Questionnaire developed by Van Oudenhoven et al. (2003) measures four attachment styles whose application may bear more fruitful findings.

#### Conclusion

We found that authentic leadership enhanced job satisfaction and decreased perceived stress and stress symptoms as three dimensions of employee well-being. In exploring these relationships, attachment insecurity was viewed as a mediating factor. Authentic leadership was shown to decrease attachment insecurity and attachment insecurity was depicted as a factor decreasing job satisfaction and increasing perceived stress and stress symptoms. Furthermore, our results indicated that authentic leadership directly and indirectly impacted job satisfaction. However, leader's authenticity only indirectly, through attachment insecurity, influenced perceived stress and stress symptoms. In sum, the study highlights the importance of authentic leadership in boosting security felt in close relationships and the consequences of this secure feelings on employees' well-being. Together, the results underscore the value of devoting further research attention to authentic leadership, antecedents and outcomes of attachment security, and the indirect role attachment security plays in contributing to important individual and organizational outcomes such as job satisfaction, perceived stress and stress symptoms.

#### **Appendix**

See Tables 4 and 5.

**Table 4** Results of contemporary factor analysis for the measures of variables studied

Variable	Indicator	Factor loading	Robust t value	Loading average	CA	CRI	AVE
Authentic leadership	Self-awareness	0.85*	7.8	0.90	0.87	0.91	0.68
	Balanced processing	0.88*	12.1		0.89		
	Relational transparency	0.88*	8.7		0.89		
	Internalized moral perspective	0.90*	10.7		0.90		
Attachment security	Anxiety attachment	0.78*	8.8	0.80	0.86	0.88	0.56
	Avoidant attachment	0.81*	11.4		0.78		
Employee well-being	Job satisfaction	0.88*	4.8	0.87	0.87	0.89	0.58
	Perceived work stress	0.84*	6.8		0.86		
	Stress symptoms	0.90*	7.2		0.87		



Table 5 Discriminant validity of the theoretical construct measures

Variable	1	2	3	4	5
1. Authentic leadership	0.65	0.15	0.27	0.06	0.05
2. Attachment insecurity	-0.39	0.56	0.11	0.14	0.13
3. Job satisfaction	0.52	-0.33	0.51	0.14	0.10
4. Perceived work stress	0.24	0.38	-0.38	0.62	0.31
5. Stress symptoms	-0.23	0.36	-0.32	0.56	0.60

Diagonal represents the average variance extracted; while above the diagonal the shared variance (squared correlations) are represented. Below the diagonal the 95 % confidence interval for the estimated factor correlations is provided

n = 212

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