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An empirical investigation of psychological capital among flight attendants

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A B S T R A C T

Our paper develops and tests a research model that examines whether psychological capital (PsyCap) mediates the relationship between servant leadership and work engagement (WE) and whether WE mediates the effect of PsyCap on service recovery performance and life satisfaction. Data were collected from flight attendants with a two-week time lag in three waves and their pursers in the private airline companies in Iran. The results suggest that servant leadership influences WE indirectly only through PsyCap. The results also suggest that WE is a partial mediator between PsyCap and the aforesaid attitudinal and behavioral outcomes. Our study discusses theoretical implications and provides recommendations for managers in the airline industry.

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1. Introduction

One of the key challenges facing airline companies in today's competitive market environment is the management and retention of flight attendants. Flight attendants are expected to perform effectively and contribute to the delivery of a consistent brand promise (Hvass and Torfadóttir, 2014; Yeh, 2014). Flight attendants working for leading companies such as Southwest Airlines and Singapore Airlines play an important role in the delivery of such brand promise (Erkmen and Hancer, 2015). Therefore, airline companies should create a resourceful environment where they can acquire and retain talented flight attendants who are engaged in their work and display positive attitudinal and behavioral outcomes.

As an emerging personality variable or a personal resource, PsyCap refers to "an individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success" (Luthans et al., 2007, p. 3). In a supportive work environment where there is servant leadership, management encourages, motivates, and enables its frontline employees to accomplish organizational objectives (Ashill et al., 2008; Koyuncu et al., 2014). Servant leadership which "… focuses on developing employees to their fullest potential in the areas of task effectiveness, community stewardship, self-motivation, and future leadership capabilities …" (Liden et al., 2008, p. 162) can boost personal resources such as PsyCap resulting in WE. WE refers to "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). Employees who are vigorous, dedicated, and absorbed can exhibit desirable outcomes such as job satisfaction and in-role and extra-role performances (e.g., Bakker and Demerouti, 2008; Karatepe, 2014).

1.1. Purpose and contribution to existing knowledge

With the preceding in mind, the purpose of our study is to propose and test a research model that investigates PsyCap among flight attendants. Specifically, the model tests: (1) the mediating role of PsyCap in the association between servant leadership and WE and (2) WE as a mediator of the impact of PsyCap on service

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recovery performance and life satisfaction.

Our study endeavors to investigate the aforementioned relationships and contribute to current knowledge in the following ways. First, PsyCap is a personality variable or a personal resource that has received little empirical attention in frontline service jobs (Jung and Yoon, 2015; Karatepe and Karadas, 2014). It is a concept which is not "… yet widely accepted or utilized in practice" (Mills et al., 2013, p. 160). Realizing this void in the current literature, we obtain data from flight attendants two weeks apart in three waves and their pursers to gauge the selected antecedents and consequences of PsyCap.

Second, empirical research pertaining to the factors influencing PsyCap in current knowledge is sparse (Avey, 2014; Newman et al., 2014). Having a full understanding of the relationship between the two constructs is critical because servant leaders establish and maintain a work environment where they are actively involved in assisting and meeting the needs of their employees and motivate them to accomplish organizational objectives (Ashill et al., 2008; Koyuncu et al., 2014). Therefore, we gauge the association between servant leadership and PsyCap.

Third, little research has been conducted on the effect of PsyCap on WE (De Waal and Pienaar, 2013). More importantly, Mäkikangas et al. (2013) cogently discuss that extant research has examined the effects of single dispositional variables (e.g., trait competitiveness, positive affectivity) on WE. However, the current literature lacks empirical studies relating new second-order personality variables such as PsyCap to WE (Mäkikangas et al., 2013). As stated earlier, self-efficacy, hope, resilience, and optimism are the four components of PsyCap. Therefore, we test their *simultaneous* effects on WE. Gauging this relationship is significant since WE is considered as "… currently a hot topic among consulting organizations and clients" (Mills et al., 2013, p. 157).

Fourth, the current literature reveals that the influences of the components of PsyCap on employee outcomes have been studied independently (e.g., Sweetman et al., 2011). It appears that there is a need to examine their *simultaneous* effects on employee attitudes and behaviors (Chen and Lim, 2012; Karatepe and Karadas, 2014). Informed by this, our study gauges the *joint* effects of the components of PsyCap on service recovery performance that refers to "… frontline service employees' perceptions of their own abilities and actions to resolve a service failure to the satisfaction of the customer" (Babakus et al., 2003, p. 274). The other performance-related outcomes can also be equally important. However, service recovery performance is a critical outcome that requires service employees' discretionary behaviors and can be considered as part of their in-role and extra-role performances (Karatepe, 2012). Although it appears that PsyCap engenders desirable performance outcomes, extant research is still devoid of evidence appertaining to the joint effects of the components of PsyCap on service recovery performance (cf. Newman et al., 2014). As a matter of fact, there is a lack of empirical research about the factors that motivate flight attendants as internal customers to display good performance in the workplace (Fu, 2013).

Fifth, life satisfaction is defined as "an affective state resulting from one's evaluation of his or her life in general" (Karatepe and Baddar, 2006, p. 1018). It seems that there is a lack of empirical research regarding the association between PsyCap and nonwork-related outcomes (Choi and Lee, 2014; Nguyen and Nguyen, 2012). This gap also appears to be valid for the relationship between WE and nonwork-related outcomes (Mache et al., 2014). Informed by this void in existing knowledge, our study tests the influences of PsyCap and WE on life satisfaction. Lastly, the preponderance of empirical research on PsyCap has been conducted with samples in the United States (e.g., Choi and Lee, 2014). Therefore, our study obtains data from flight attendants in Iran, which is an underrepresented country in this research stream. Thus far, to the best of our knowledge, there is no empirical study that has examined the previously mentioned relationships simultaneously using data gathered from flight attendants.

2. Theoretical underpinnings and research hypotheses

2.1. Conservation of resources (COR) theory and the job demands-resources (JD-R) model

Our study uses COR theory and the JD-R model to develop the relationships among the study variables. Specifically, COR theory posits that objects, personal characteristics, conditions, and energies are the four types of resources individuals seek to acquire and protect (Hobfoll, 1989). These resources refer to "… those entities that either are centrally valued in their own right, or act as means to obtain centrally valued ends" (Hobfoll, 2002, p. 307). One of the assumptions of COR theory is that individuals seek to protect and accumulate these resources. PsyCap is a personal resource (Karatepe and Karadas, 2014) and WE results from an accumulation of individual resources (Halbesleben and Wheeler, 2008). When resources tend to come in bundles, they create resource caravans (Hobfoll, 2002). These resource caravans lead to positive outcomes.

According to the motivational process of the JD-R model, job resources (e.g., training, career opportunities, supervisor support) mitigate job demands, stimulate goal accomplishment and personal growth, which results in WE and positive outcomes (Bakker and Demerouti, 2008; Xanthopoulou et al., 2007). The JD-R model also proposes that job resources influence WE independently or indirectly through personal resources (Bakker and Demerouti, 2008).

When the aforementioned assumption of COR theory is considered with the JD-R model, it would be expected that a resourceful work environment or job resources result in an accumulation of resources that will give rise to desirable outcomes (Xanthopoulou et al., 2007). Specifically, the existence of a work environment where servant leadership is promoted activates employees' personal resources such as PsyCap, which in turn results in WE, service recovery performance, and life satisfaction. Employees with high WE also display better performance in the workplace and are more satisfied with life in general.

2.2. Hypotheses

In his book, Greenleaf (1977) states, "The servant leader is servant first. It begins with a natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead" (p. 27). Servant leadership focuses on serving employees for the good of employees (Graham, 1991). Servant leaders serve as role models, inspire trust and confidence, provide resources, and form relationships with their followers or employees (Koyuncu et al., 2014; Liden et al., 2008). Under these circumstances, servant leaders try to create a resourceful environment where they are "… forming relationships with subordinates, empowering subordinates, helping subordinates grow and succeed, behaving ethically, having conceptual skills, putting subordinates first, and creating value for those outside of the organization" (Ehrhart, 2004, p. 73).

There are empirical studies regarding the association between several types of leadership and PsyCap in the current literature. For example, McMurray et al. (2010) found that leadership behavior (transactional and transformational) was a significant predictor of PsyCap among employees in a large non-profit organization. Rego et al. (2012) reported that authentic leadership boosted PsyCap among employees in different commerce organizations in Portugal. However, what is known about the effect of servant leadership on

PsyCap is scarce.

In a resourceful work environment where flight attendants obtain sufficient social support, have various high-performance work practices, and observe ethical behaviors displayed by superiors will be high on PsyCap. Consistent with the tenets of COR theory, a resourceful work environment and PsyCap will lead to an accumulation of resources (e.g., performance feedback, coworker support). In short, such a work environment will activate flight attendants' personal resources (cf. Xanthopoulou et al., 2007) and foster their advocacy (Yeh, 2014). Accordingly, we advance the following hypothesis:

H1. Servant leadership will be positively related to PsyCap.

Servant leadership is an important element for establishing and maintaining an environment where customers receive quality services from frontline employees (Ashill et al., 2008). Not surprisingly, employees who perceive that servant leaders try to form long-term relationships with them, empower them, understand and empathize with them, and display ethical behaviors feel vigorous and dedicated and are absorbed by their work. As COR theory contends, employees in such an environment can accumulate their resources (e.g., performance feedback, coworker support). However, empirical research concerning the association between servant leadership and WE is scanty (Van Dierendonck, 2011).

The results of an empirical study conducted with employees of information technology companies showed that servant leadership boosted WE (De Clercq et al., 2014). Based on this reasoning, we argue that flight attendants will have elevated levels of WE when they find that management possesses servant leadership qualities and tries to create an environment where there are a number of signals of servant leadership such as social support, high-performance work practices, and ethical behaviors. Therefore, we advance the following hypothesis:

H2. Servant leadership will be positively related to WE.

An examination of the current literature demonstrates that there are empirical studies assessing the individual effects of the components of PsyCap on WE (e.g., Karatepe, 2014; Xanthopoulou et al., 2008). It also seems that there are several studies that center on the influence of overall PsyCap on WE (De Waal and Pienaar, 2013; Nigah et al., 2012). More importantly, empirical research pertaining to the joint effects of the components of PsyCap on WE is meager (Jung and Yoon, 2015; Karatepe and Karadas, 2015).

Flight attendants who are high on PsyCap are engaged in their work at elevated levels. Specifically, flight attendants or employees in frontline service jobs with self-efficacy beliefs have the capacity to do the job (Xanthopoulou et al., 2008). Employees high on hope can pursue strategies to accomplish their goals and/or can avail themselves of alternative paths to reach their goals (Karatepe, 2014). Resilient individuals can show positive coping and adaptation when they are faced with significant adversity and extreme positive events (Luthans et al., 2008). Employees with high optimism have an objective assessment of what can be done to achieve objectives with available resources in a specific situation (Luthans et al., 2008). In short, employees who are self-efficacious, hopeful, resilient, and optimistic at the same time will have higher WE (Karatepe and Karadas, 2015). The aforementioned discussion is congruent with the precepts of COR theory that PsyCap is a personal resource predicting WE that arises from an accumulation of individual resources. Therefore, we postulate that:

H3. PsyCap will be positively related to WE.

PsyCap plays a mediating role in the relationship between servant leadership and WE. Theoretical explanations emerging from the JD-R model present guidance to develop such a relationship (Bakker and Demerouti, 2008). That is, we propose that a resourceful work environment that fosters servant leadership promotes flight attendants' self-efficacy, hope, resilience, and optimism. Such employees in turn are work-engaged at elevated levels. There is also evidence about the job resources → personal resources → WE relationship (e.g., Xanthopoulou et al., 2007, 2008). Therefore, we advance the following hypothesis:

H4. PsyCap will mediate the relationship between servant leadership and WE.

COR theory posits that employees who are high on PsyCap have more resources to pursue and accomplish their goals (Newman et al., 2014). Under these circumstances, employees should display better performance at work. Accordingly, we propose that flight attendants who are more self-efficacious, hopeful, resilient, and optimistic can perform better while dealing with passenger requests and problems. There are several empirical studies that test the direct effect of PsyCap on performance-related variables (Newman et al., 2014). However, none of these studies has assessed the effects of the components of PsyCap *simultaneously* on *service recovery performance*.

In line with the principles of COR theory, Alarcon et al. (2013) discuss that the availability of sufficient personal resources should contribute to one's psychological and physical well-being. That is, individuals display well-being when they are high on a number of personal resources (e.g., hope, optimism). Based on this reasoning, we contend that PsyCap is a personal resource that contributes to flight attendants' life satisfaction. There are several empirical studies that have tested the impact of PsyCap on life satisfaction (Choi and Lee, 2014; Nguyen and Nguyen, 2012). We are aware of only Karatepe and Karadas's (2015) study that has gauged the effects of the components of PsyCap simultaneously on life satisfaction using data obtained from hotel employees in Romania. Accordingly, we advance the following hypothesis:

H5. PsyCap will be positively related to (a) service recovery performance and (b) life satisfaction.

WE which results from an accumulation of individual resources activates employees' service recovery efforts and promotes their life satisfaction. A synthesis of the relevant literature shows few empirical studies that WE fosters service recovery performance or life satisfaction in frontline service jobs (Karatepe, 2014; Karatepe and Karadas, 2015). The relevant literature also appears to provide limited evidence about the relationship between WE and performance outcomes with regard to airline services. For example, Yeh's (2012) study revealed that WE bolstered flight attendants' service performance in Taiwan. Chen and Kao's (2012) research in the same country demonstrated that WE boosted flight attendants' in-role and extra-role performances. However, evidence appertaining to the influence of WE on both service recovery performance and life satisfaction in the airline industry is scarce. Accordingly, we propose that flight attendants high on WE should be capable of managing passenger requests and offering satisfactory solutions to passenger complaints. Such employees should be satisfied with life in general. This prompts the following hypotheses:

H6. WE will be positively related to (a) service recovery performance and (b) life satisfaction.

According to COR theory, both PsyCap and WE enable individuals to have more resources to achieve their goals. As a result, they display effective performance in the workplace and have better life satisfaction. Not surprisingly, individuals have such

resources since PsyCap is a personal resource and WE emerges from an accumulation of individual resources (Halbesleben and Wheeler, 2008; Hobfoll, 1989). The JD-R model also posits that employees who feel self-efficacious, can find alternative ways to handle barriers and exercise the most suitable strategy, are resilient, and are optimistic about the future stay engaged in their work (Karatepe, 2014; Xanthopoulou et al., 2007). Such employees in turn are capable of dealing with problems and complaints in challenging service encounters and display higher life satisfaction (Bakker and Demerouti, 2008; Karatepe, 2014).

The current literature presents empirical studies regarding the personal resources → WE → employee outcomes relationship. For instance, Rich et al. (2010) showed that WE mediated the effects of core self-evaluations on task performance and organizational citizenship behavior. Karatepe (2014) demonstrated that hope activated service recovery, job, and extra-role performances through WE among hotel employees in Romania. Karatepe and Karadas's (2015) research in the same setting in Romania indicated that the components of PsyCap jointly boosted job, career, and life satisfaction via WE. Accordingly, we advance the following hypotheses:

H7. WE will mediate the influence of PsyCap on (a) service recovery performance and (b) life satisfaction.

2.3. Research model

The underlying premise of the research model presented in Fig. 1 is that PsyCap plays a mediating role in the relationship between servant leadership and WE and WE is a mediator between PsyCap and service recovery performance and life satisfaction. Specifically, our model proposes that flight attendants working in an environment where there are servant leaders who try to teach and guide them about how to perform successfully are self-efficacious, hopeful, resilient, and optimistic. These employees in turn exhibit higher WE. Our model also contends that employees high on PsyCap are more engaged in their work and therefore display recovery efforts needed to restore the satisfaction of aggrieved passengers and are more satisfied with life in general. As discussed earlier, these relationships are developed based on the tenets of COR theory and the JD-R model.

3. Method

3.1. Sample and procedure

Data were gathered from flight attendants in the private airline companies in Iran. Information received from the Iran Civil Aviation Organization at the time of our study revealed that there were thirteen private airline companies which had international and/or domestic flights. Management of each company was contacted through a letter that gave information about the study and included permission for data collection. Management of three airline companies agreed to participate in the study. Two of these companies had both international and domestic flights, while the other company had only domestic flights.

Permission for collecting data directly from flight attendants was not given. Therefore, all questionnaires were distributed to flight attendants through their supervisors. Utilizing such procedure is congruent with other recent studies (e.g., Karatepe and Choubtarash, 2014; Lee and Ok, 2014). Our study minimized the potential risk of common method bias by using temporal separation and purser assessment. Specifically, our study obtained data from flight attendants in three waves where the three waves were separated by a time lag of two weeks. Our study also gathered data from the pursers about flight attendants' service recovery performance. Using a temporal separation and multiple sources of data at the same time "… can diminish or eliminate the effects of consistency motifs, idiosyncratic implicit theories, social desirability tendencies, dispositional mood states, and tendencies on the part of the rater to acquiesce or respond in a lenient, moderate, or extreme manner because they make it impossible for the mindset of a common rater to bias the predictor-criterion relationship" (Podsakoff et al., 2012, p. 548).

The Time 1 questionnaire included the servant leadership measure. Items about respondents' profile appeared at the end of the Time 1 questionnaire. The Time 2 questionnaire contained the PsyCap and WE measures, while the Time 3 questionnaire was comprised of the life satisfaction measure. The purser questionnaire consisted of the service recovery performance measure. Each questionnaire had a cover letter which promised anonymity and confidentiality. In addition, all questionnaires were returned directly to the researcher in sealed envelopes. Matching all
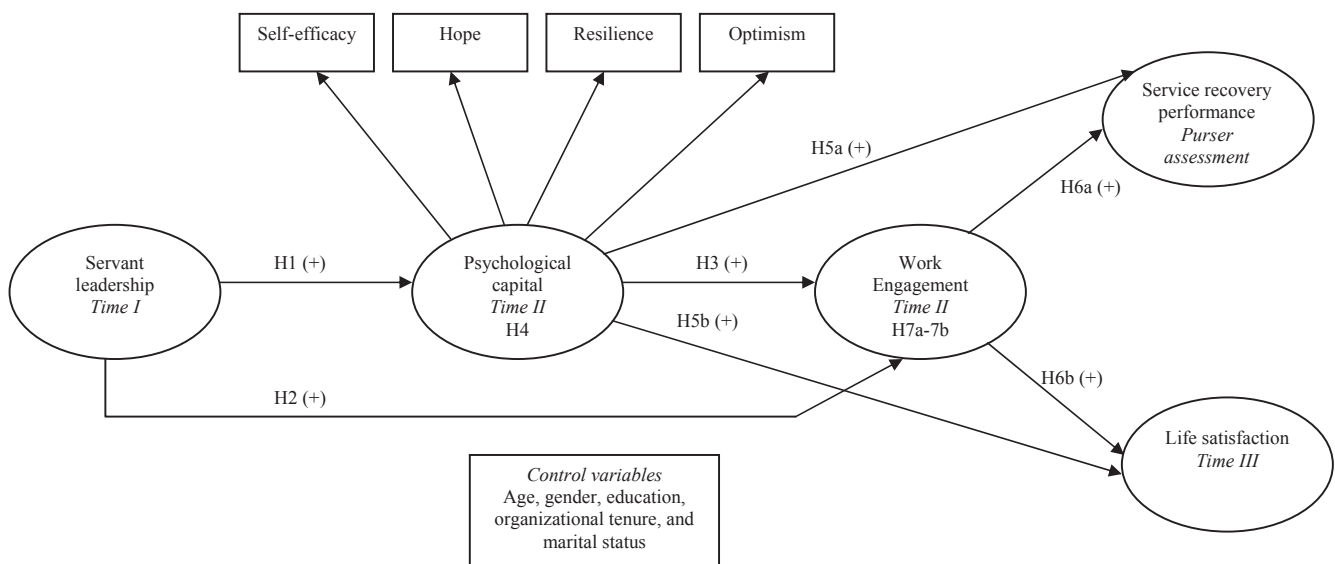

Fig. 1. Research model.

questionnaires with each other was done through identification numbers.

Two hundred and thirty Time 1 questionnaires were distributed to flight attendants. Two hundred and thirty Time 1 questionnaires were returned. One questionnaire was eliminated due to missing information. Two hundred and twenty-nine questionnaires at Time 2 were distributed to the same flight attendants. Two hundred and sixteen questionnaires were returned. Sixteen questionnaires were eliminated because of various missing information at Time 2. As a result, usable two hundred Time 2 questionnaires were returned. That is, data from 200 Time 2 questionnaires were used. Two hundred Time 3 questionnaires were then distributed to the same flight attendants. Usable 200 questionnaires were retrieved at Time 3. A total number of 42 pursers assessed 200 flight attendants' service recovery performance. In short, data obtained from 200 flight attendants were used to gauge the relationships.

Fifty-nine (30%) respondents were in the 18–27 age categories, while 120 (60%) respondents were aged between 28 and 37 years. The rest were older than 37 years. The sample was 44% male and 56% female. In terms of educational achievement, 45 (23%) respondents had two-year college degrees, 113 (57%) had four-year college degrees, and 31 (16%) had graduate degrees. The rest had secondary and high school education. With regard to organizational tenure, 117 (59%) respondents had tenures of five years or less. Seventy (35%) respondents had tenures between six and ten years. The rest had tenures for more than ten years. The majority of the respondents (60%) were single or divorced, while the rest were married.

3.2. Operationalization of constructs

We used a number of well-established scale items to measure servant leadership, PsyCap, WE, service recovery performance, and life satisfaction. Specifically, a six-item scale taken from Lytle et al. (1998) was used to operationalize servant leadership. Assessing servant leadership with these items is also observed in other studies (e.g., Ashill et al., 2008; Babakus et al., 2011). Responses to items of servant leadership included a five-point scale (5 = *strongly agree* to 1 = *strongly disagree*).

Self-efficacy, hope, resilience, and optimism are the four components representing PsyCap. PsyCap was gauged with 24 items taken from Luthans et al. (2007). Each component was measured using six items. The PsyCap questionnaire is widely used to measure the abovementioned components (e.g., Nigah et al., 2012; Rego et al., 2012). Responses to items of PsyCap consisted of a six-point scale (6 = *strongly agree* to 1 = *strongly disagree*). WE was operationalized with the shortened version of the Utrecht WE scale (Schaufeli et al., 2006). This is a well-known scale in the extant literature and is widely used to test WE (e.g., Karatepe, 2014; Nigah et al., 2012). Response options in WE included a seven-point frequency rating scale (6 *always* to 0 *never*).

Five items obtained from Boshoff and Allen (2000) were utilized to assess service recovery performance. An analysis of the current literature indicates that the service recovery performance scale given above has been used in a number of empirical investigations (e.g., Ashill et al., 2008; Karatepe, 2014; Karatepe and Choubtarash, 2014). Responses to items of service recovery performance included a five-point scale (5 = *strongly agree* to 1 = *strongly disagree*). Finally, life satisfaction used five items from Diener et al. (1985). The life satisfaction scale taken from Diener et al. (1985) has been referenced by many empirical studies (e.g., Aryee et al., 1999; Karatepe and Karadas, 2015). Responses to items of life satisfaction ranged from (7 = *strongly agree* to 1 = *strongly disagree*).

To be consistent with extant research, the control variables consist of demographic variables. This is because of the fact that

treating them as control variables enables the researcher to avoid statistical confounds (e.g., Avey, 2014; Chen and Kao, 2012; Karatepe and Choubtarash, 2014; Karatepe and Karadas, 2014; Yeh, 2012).

The back-translation method was utilized to prepare all questionnaires. Each questionnaire was subjected to four different pilot studies for the understandability of items. Each pilot study included five different respondents. No changes were made in the questionnaires as a result of these pilot studies.

3.3. Statistical analyses

Our study assessed the measurement model and tested the hypothesized model following the recommendations of Anderson and Gerbing's (1988) two-step approach. Specifically, the first step consisted of the assessment of the measurement model in terms of convergent and discriminant validity as well as composite reliability using confirmatory factor analysis (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988; Fornell and Larcker, 1981). The second step involved the test of the associations in the hypothesized model via structural equation modeling. We also compared the hypothesized model with the alternative models through the χ^2 difference test (James et al., 2006). Both confirmatory factor analysis and structural equation modeling were conducted via LISREL 8.30 (Joreskog and Sorbom, 1996). The Sobel test was employed for the significance of the mediating effects (e.g., servant leadership → PsyCap → WE relationship).

The overall χ^2 measure, comparative fit index (CFI), parsimony normed fit index (PNFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) were used and reported for the measurement and hypothesized models. Our study also demonstrated summary statistics and correlations by computing a composite score for each observed variable.

4. Results

4.1. Measurement model

The results arising from confirmatory factor analysis suggested scale purification that resulted in deletion of several items due to non-significant *t*-values and correlation measurement errors. As can be found in Table 1, two items each from the servant leadership and life satisfaction measures, three items each from the resilience, optimism, and WE measures, and one item each from the self-efficacy and hope measures were dropped. This scale purification process has been suggested for discarding items that do not work out (cf. Hartline and Ferrell, 1996). In addition, items deleted from the PsyCap measure, especially from the resilience and optimism measures, that stem from poor loadings and poor reliability coefficients are found in different studies (e.g., Chen and Lim, 2012; Karatepe and Karadas, 2015). Consequently, the eight-factor measurement model fit the data acceptably ($\chi^2 = 866.55$ *df* = 499; $\chi^2/df = 1.74$; CFI = 0.90; PNFI = 0.70; RMSEA = 0.061; SRMR = 0.066). The results in Table 1 indicated that all loadings were significant. The average variance extracted by each latent variable was greater than 0.50. Consequently, the results revealed that there was sufficient evidence for convergent validity of the measures (Anderson and Gerbing, 1988; Fornell and Larcker, 1981).

The results demonstrated that there was sufficient evidence for discriminant validity of the measures because none of the shared variances between pairs of variables was greater than the average variance extracted by each variable (Fornell and Larcker, 1981). In light of the results depicted in Table 1, all measures were reliable. Specifically, each latent variable had a composite reliability score that was larger than 0.60. The results in Table 2 showed summary statistics and correlations of all variables.

Table 1
Scale items and confirmatory factor analysis results ($n = 200$).

Scale items	Standardized loading	t-value	AVE	CR
Servant leadership			0.73	0.82
Management constantly communicates the importance of service	_a	–		
Management regularly spends time "on the floor" with flight attendants	0.58	8.26		
Management is constantly measuring service quality	_a	–		
Management shows that they care about service by constantly giving of themselves	0.73	11.06		
Management provides resources, not just "lip service", to enhance flight attendant ability to provide excellent service	0.79	12.31		
Managers give personal input and leadership into creating quality service	0.81	12.67		
Self-efficacy			0.73	0.85
Item # 1	0.65	9.67		
Item # 2	0.73	11.33		
Item # 3	0.81	13.17		
Item # 4	0.85	14.14		
Item # 5	0.60	8.80		
Item # 6	_a	–		
Hope			0.72	0.85
Item # 7	_a	–		
Item # 8	0.73	11.35		
Item # 9	0.53	7.72		
Item # 10	0.83	13.66		
Item # 11	0.76	12.07		
Item # 12	0.77	12.41		
Resilience			0.65	0.70
Item # 13 (−)	_a	–		
Item # 14	_a	–		
Item # 15	0.60	7.77		
Item # 16	_a	–		
Item # 17	0.58	7.55		
Item # 18	0.78	10.10		
Optimism			0.76	0.81
Item # 19	_a	–		
Item # 20 (−)	_a	–		
Item # 21	0.73	11.04		
Item # 22	0.79	12.36		
Item # 23 (−)	_a	–		
Item # 24	0.77	12.05		
Wok engagement			0.79	0.91
At my work, I feel bursting with energy	_a	–		
At my job, I feel strong and vigorous	_a	–		
I am enthusiastic about my job	_a	–		
My job inspires me	0.89	15.75		
When I get up in the morning, I feel like going to work	0.90	16.03		
I feel happy when I am working intensely	0.86	15.00		
I am proud of the work that I do	0.73	11.78		
I am immersed in my work	0.75	12.26		
I get carried away when I am working	0.62	9.43		
Service recovery performance			0.66	0.80
Considering all the things this flight attendant does, he/she handles dissatisfied passengers quite well	0.66	9.71		
This flight attendant doesn't mind dealing with complaining passengers	0.75	11.63		
No passenger this flight attendant deals with leaves with problems unresolved	0.33	4.41		
Satisfying complaining passengers is a great thrill to this flight attendant	0.76	11.83		
Complaining passengers this flight attendant has dealt with in the past are among today's most loyal passengers	0.78	12.21		
Life satisfaction			0.81	0.85
In most ways my life is close to my ideal	0.85	14.27		
The conditions of my life are excellent	0.92	15.92		
I am satisfied with my life	_a	–		
So far I have gotten the important things I want in my life	_a	–		
If I could live my life over, I would change almost nothing	0.65	9.88		

Model fit statistics: $\chi^2 = 866.55$, $df = 499$; $\chi^2/df = 1.74$; CFI = 0.90; PNFI = 0.70; RMSEA = 0.061; SRMR = 0.066.

Note: All loadings are significant at the 0.01 level. AVE = Average variance extracted; CR = Composite reliability; CFI = Comparative fit index; PNFI = Parsimony normed fit index; RMSEA = Root mean square error of approximation; SRMR = Standardized root mean square residual.
^a Dropped during CFA. (−) Reverse-scored item.

4.2. Hypothesized model

The hypothesized model was compared with the alternative models. The results were reported in Table 3. The hypothesized model seemed to display a better fit than the alternative models through the χ^2 difference test. In short, the hypothesized model fit the data well ($\chi^2 = 527.05$ $df = 287$; $\chi^2/df = 1.84$; CFI = 0.92; PNFI = 0.67; RMSEA = 0.065; SRMR = 0.065).

The structural parameter estimates are presented in Fig. 1. The results indicate that hope ($\lambda_2 = 0.77$, $t = 6.21$) is the most important indicator of PsyCap, followed by optimism ($\lambda_4 = 0.75$, $t = 6.18$), self-efficacy ($\lambda_1 = 0.48$), and resilience ($\lambda_3 = 0.34$, $t = 3.90$). The results

Table 2
Summary statistics and correlations of study variables.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	—												
2. Gender	−0.143*	—											
3. Education	0.123*	0.071	—										
4. Organizational tenure	0.547**	−0.066	0.007	—									
5. Marital status	0.395**	−0.016	−0.073	0.434**	—								
6. Servant leadership	−0.102	0.010	−0.218**	−0.037	0.022	—							
7. Self-efficacy	0.039	−0.110	0.061	−0.040	0.072	0.157*	—						
8. Hope	−0.138*	−0.049	−0.144*	−0.122*	0.074	0.374**	0.366**	—					
9. Resilience	0.070	−0.009	0.007	0.074	0.097	0.121*	0.342**	0.210**	—				
10. Optimism	0.071	−0.031	−0.117*	0.037	0.155*	0.345**	0.356**	0.560**	0.339**	—			
11. Work engagement	0.092	−0.056	−0.164**	0.049	0.176**	0.322**	0.361**	0.504**	0.274**	0.565**	—		
12. Service recovery performance	0.117*	0.054	0.005	0.138*	0.130*	0.322**	0.284**	0.355**	0.196**	0.365**	0.493**	—	
13. Life satisfaction	−0.016	0.012	−0.226**	0.056	0.166**	0.382**	0.137*	0.521**	0.057	0.483**	0.560**	0.320**	—
Mean	1.81	0.57	3.82	2.36	0.41	2.65	4.60	4.25	4.84	4.25	4.00	3.10	4.01
Standard deviation	0.61	0.50	0.76	0.78	0.49	0.93	0.83	0.97	0.86	1.09	1.35	0.58	1.46

Note: $^*p < 0.05$, $^{**}p < 0.01$ (one-tailed test). Gender was coded as a binary variable (0 = male and 1 = female). Age was measured in three categories. Education and organizational tenure were measured in four categories. Marital status was also coded as a binary variable (0 = single or divorced and 1 = married).

Table 3
Results of model comparison.

Models	χ^2	df	$\Delta\chi^2$	Δdf	Model comparison
1. Hypothesized model (SL → PSYCAP, WE; PSYCAP → WE, SRP, LSAT; WE → SRP, LSAT)	527.05	287	—	—	—
2. Alternative model I (SL → PSYCAP, WE, SRP, LSAT; PSYCAP → WE, SRP, LSAT; WE → SRP, LSAT)	525.89	285	1.2	2	1 and 2
3. Alternative model II (SL → PSYCAP; PSYCAP → WE; WE → SRP, LSAT)	545.18	290	18.1	3	1 and 3

Note: SL = Servant leadership; PSYCAP = Psychological capital; WE = Work engagement; SRP = Service recovery performance; LSAT = Life satisfaction. Age, gender, education, organizational tenure, and marital status have been incorporated into the hypothesized and alternative models.

illustrate that servant leadership is positively related to PsyCap ($\beta_{21} = 0.50$, $t = 4.18$). Therefore, hypothesis 1 is supported. Contrary to our hypothesis, servant leadership does not significantly influence WE ($\beta_{31} = -0.02$, $t = -0.26$). Hence, there is no empirical support for hypothesis 2. Hypothesis 3 is supported because PsyCap depicts a positive relationship with WE ($\beta_{32} = 0.74$, $t = 5.36$). These results suggest that PsyCap plays a full mediating role in the relationship between servant leadership and WE. This is also supported by the Sobel test. That is, the indirect impact of servant leadership on WE via PsyCap based on the Sobel test is significant and positive (z-score = 3.27). Hence, hypothesis 4 is supported.

In accord with hypotheses 5a and 5b, PsyCap has a positive influence on both service recovery performance ($\beta_{42} = 0.39$, $t = 2.65$) and life satisfaction ($\beta_{52} = 0.45$, $t = 3.37$). Therefore, hypotheses 5a and 5b are supported. In support of hypotheses 6a and 6b, WE portrays a positive relationship with both service recovery performance ($\beta_{43} = 0.25$, $t = 2.00$) and life satisfaction ($\beta_{53} = 0.29$, $t = 2.67$). According to these results, WE partially mediates the influence of PsyCap on service recovery performance and life satisfaction. The Sobel test result also reveals that PsyCap influences service recovery performance (z-score = 1.81) and life satisfaction (z-score = 2.36) directly and indirectly through WE. Hence, hypotheses 7a and 7b are supported.

Several control variables are significantly related to study variables. Specifically, education is negatively related to servant leadership ($\gamma_{13} = -0.23$, $t = -2.87$) and WE ($\gamma_{33} = -0.12$, $t = -1.91$). It seems that flight attendants with better education have unfavorable perceptions of servant leadership, while they are less engaged in their work. Further, organizational tenure is positively related to service recovery performance ($\gamma_{44} = 0.15$, $t = 1.78$) and marital status is positively associated with PsyCap ($\gamma_{25} = 0.18$, $t = 2.08$). It appears that flight attendants with longer tenure are capable of

managing passenger requests and complaints. According to COR theory, tenure is a condition resource (Hobfoll, 1989). Flight attendants take advantage of their tenure in the organization to deliver quality services and deal with passengers problems. This may also be due to their willingness to handle passenger requests and provide effective solutions to passenger problems (cf. Babakus et al., 2003). The finding which refers to the association between marital status and PsyCap suggests that married flight attendants are high on PsyCap.
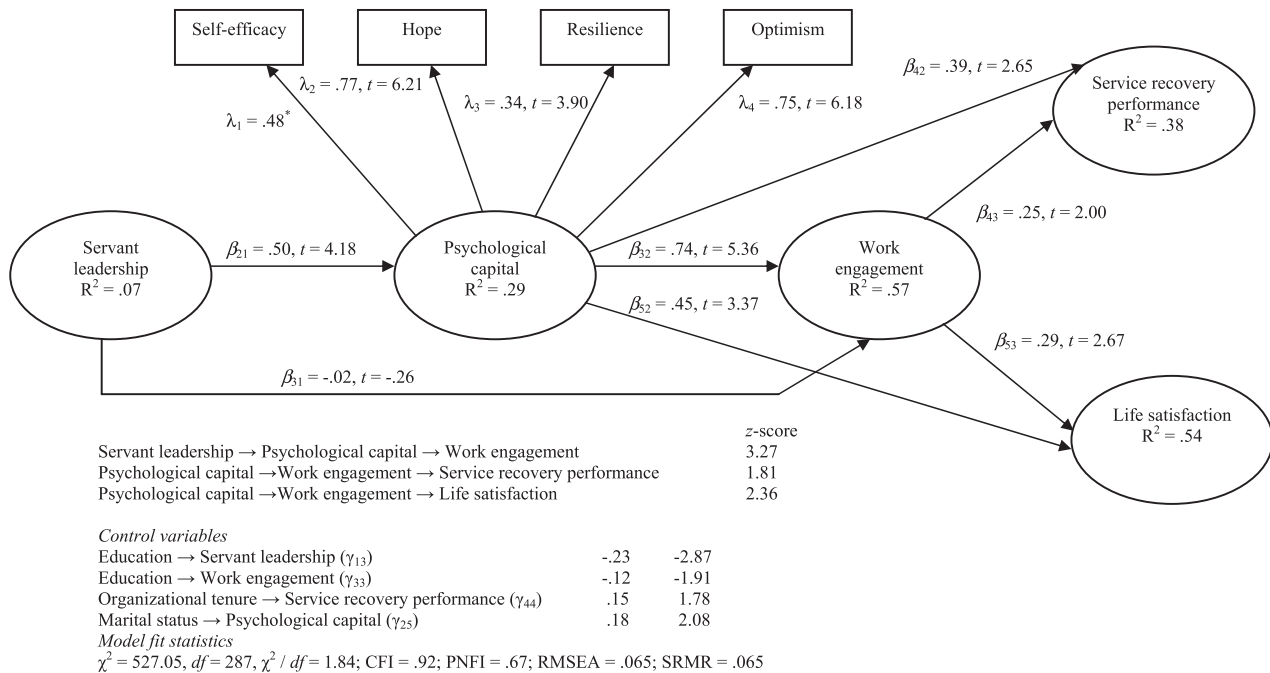
As presented in Fig. 2, the results explain 7% of the variance in servant leadership, 29% in PsyCap, 57% in WE, 38% in service recovery performance, and 54% in life satisfaction. In addition, the control variables do not confound the relationships.

5. Discussion

5.1. Summary of findings and contribution to current knowledge

Our study was aimed at proposing and testing a research model that examined the mediating role of PsyCap in the association between servant leadership and WE and WE as a mediator between PsyCap and service recovery performance and life satisfaction. Based on data obtained from flight attendants with a time lag of two weeks in three waves and their pursers in Iran, the results provided support for almost all hypothesized relationships.

The results suggest that management of airline companies that possesses servant leadership qualities fosters flight attendants' personal resources such as PsyCap. That is, flight attendants are self-efficacious, hopeful, resilient, and optimistic when management sends powerful signals to them about the presence of servant leadership practices by forming relationships with subordinates, empowering subordinates, or displaying ethical behaviors.

Fig. 2. Test of research hypotheses.

Consistent with the tenets of COR theory (e.g., Halbesleben and Wheeler, 2008; Xanthopoulou et al., 2007), flight attendants will be able to accumulate resources (e.g., performance feedback, coworker support) emerging from the resourceful environment and personal resources associated with PsyCap. The finding regarding the association between servant leadership and PsyCap is important because what is known about the antecedents of PsyCap in current knowledge is still scarce (Avey, 2014).

The results further suggest that PsyCap boosts flight attendants' WE. Unlike a number of empirical studies in the current literature (Karatepe and Karadas, 2015; Mäkikangas et al., 2013), our study tests the effects of self-efficacy, hope, resilience, and optimism simultaneously on WE and provides support for this relationship for in-flight service jobs. The results suggest that PsyCap fully mediates the effect of servant leadership on WE. This is due to the fact that flight attendants high on PsyCap are energetic and enthusiastic about their job and are absorbed by their work once they perceive that servant leadership is in place. This finding is also congruent with the motivational process of the JD-R model that highlights the job resources → personal resources → WE relationship (e.g., Xanthopoulou et al., 2008).

In line with the predictions given in this study, WE partially mediates the influence of PsyCap on service recovery performance and life satisfaction. Specifically, flight attendants high on PsyCap display WE at elevated levels. Such employees in turn manage passenger requests and problems effectively and are more satisfied with life in general. Consistent with the JD-R model (e.g., Bakker and Demerouti, 2008; Karatepe, 2014), PsyCap as a personal resource activates WE that in turn leads to better employee outcomes such as service recovery performance and life satisfaction. These results are significant since empirical research about the simultaneous effects of the components of PsyCap on the aforesaid employee outcomes is sparse (Choi and Lee, 2014; Newman et al., 2014). More importantly, to our knowledge, it is the first

empirical investigation that focuses on PsyCap as a mediator of the effect of servant leadership on WE and WE as a mediator between PsyCap and service recovery performance and life satisfaction using data gathered from flight attendants in Iran, a developing non-Western country.

5.2. Limitations and future research

Our study has several limitations that lead to directions for future research. First, one of the limitations of our study that should be addressed relates to employee outcomes. Future research can focus on flight attendants' team performance and actual turnover as employee outcomes in addition to service recovery performance and life satisfaction. This will enable the researcher to test WE as a mediator between PsyCap and these work and nonwork outcomes. Second, data were gathered from flight attendants two weeks apart in three waves. Using such data collection procedure is likely to provide evidence of causality. However, this is not enough. Therefore, future studies should utilize a temporal separation which is longer than two weeks in order to address the issue of causality.

Third, we used WE as a motivational construct that played a mediating role in the association between PsyCap and employee outcomes. A synthesis of the literature in frontline service jobs reveals that there is a lack of empirical research regarding the mediating role of PsyCap in the association between servant leadership and job embeddedness, which is an employee retention strategy. This void is also valid about job embeddedness as a mediator between PsyCap and employee outcomes (cf. Sun et al., 2012). With this recognition, future research can test job embeddedness as a mediating variable in the research model.

Fourth, as we mentioned before, obtaining data from flight attendants two weeks apart in three waves and their pursers can decrease or eliminate social desirability tendencies (Podsakoff et al., 2012). However, data regarding flight attendants' PsyCap

and WE were gathered at Time 2. In future studies, collecting data about these variables via different time lags or obtaining data regarding flight attendants' WE from their coworkers would be beneficial. On a closing note, replication studies with large sample sizes in similar Middle East countries would add to current knowledge.

5.3. Practical implications

Several managerial implications that stem from the findings of our study can pay dividends. First, management of airline companies should consider the critical role of servant leadership that fosters flight attendants' personal resources and makes them stay engaged in their work. It is not so easy to have a resourceful work environment where management practices servant leadership by empowering subordinates, putting subordinates first, or forming relationships with subordinates. It seems that management can create such a climate that gives powerful messages to flight attendants about the spirit of servant leadership. This can be achieved via intense investment in high-performance work practices (e.g., training, empowerment, rewards, career opportunities), work social support (e.g., supervisor support), and technology (cf. Fu, 2013; Yeh, 2014).

Second, management of airline companies should acknowledge that acquisition and retention of talented individuals in frontline service jobs is a source of differentiation and competitive advantage. This is due to the fact that flight attendants are the main actors in challenging service encounters. Accordingly, management should make sure that individuals who are high on self-efficacy, hope, resilience, and optimism and have high levels of WE are hired for in-flight service jobs. This can be done using the PsyCap questionnaire and the Utrecht WE questionnaire to ascertain whether these individuals are high or low on PsyCap and WE. The PsyCap questionnaire can also be utilized to determine whether individuals hired will need training interventions (cf. Karatepe and Karadas, 2014). What is discussed here overtly refers to the importance of selective staffing. Third, it is important to note that flight attendants who are high on PsyCap and WE are more satisfied with life in general. This is because of the fact that they do the job they want to. Therefore, paying utmost attention to selective staffing is likely to enable management to retain such individuals.

Lastly, it has been reported that PsyCap and WE stimulate flight attendants' service recovery performance. Management that is willing to satisfy each passenger with service delivery and complaint handling processes should possess a bundle of strategies concerning service recovery. This will contribute to passenger retention rate (cf. Ng et al., 2011). Otherwise, passengers will not develop trust with the airline company pertaining to the immediate solutions they receive.

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