



Outcomes of job crafting among flight attendants



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ABSTRACT

Underpinned by Job Demands-Resources theory, our study proposes and tests a conceptual model that examines the outcomes of job crafting among flight attendants. Specifically, our study links job crafting, as manifested by increasing structural job resources, increasing social job resources, and increasing challenging job demands, to quitting intentions and service recovery performance through work engagement. Our study used a time-lagged design and multiple sources of data. The results from structural equation modeling reveal that job crafting fosters flight attendants' work engagement and service recovery performance. As hypothesized, work engagement alleviates quitting intentions. Consistent with our prediction, work engagement mediates the influence of job crafting on quitting intentions. Contrary to what has been hypothesized, the empirical data do not lend any support to the mediating role of work engagement in the relationship between job crafting and service recovery performance.

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1. Introduction

In today's competitive aviation industry, flight attendants are a key input to delivery of exemplary services to passengers and passenger satisfaction. However, they are frequently beset with jetlag, role stress, long night shifts, dysfunctional passenger attitudes and behaviors, and/or burnout (e.g., Karatepe and Vatankhah, 2014; Kim and Back, 2012). Flight attendants do emotion work, are expected to work in teams effectively, and need to develop relationships with their colleagues for better service performance and respond to passenger requests promptly (Fu, 2013; Karatepe and Vatankhah, 2014; Park and Park, 2016; Xanthopoulou et al., 2008). Since such customer-contact employees spend a great deal of time serving passengers, they may ask for an opportunity to be active job crafters or may be in need of job crafting for successful service performance (cf. Bakker, 2010; Weseler and Niessen, 2016).

Almost more than three decades ago, Kulik et al. (1987) underscored the significance of job crafting. They suggested that employees can make changes in their jobs on their own initiative. According to Wrzesniewski and Dutton (2001), job crafting is defined as “the physical and cognitive changes individuals make in the task or relational boundaries in their work” (p. 179). Apart from

cognitive changes in work tasks and relationships, job crafting may also be considered based on job characteristics (Bakker et al., 2012). According to Job Demands-Resources (JD-R) theory, job characteristics can be classified into two general categories, which are job demands and job resources (Bakker and Demerouti, 2008). Using JD-R theory, job crafting can be defined as the changes employees may make pertaining to job demands and resources (Tims and Bakker, 2010). Increasing structural and social job resources as well as increasing challenging job demands represent job crafting (Bakker and Demerouti, 2016; Tims et al., 2012). Employees may redesign their jobs using job demands and resources and display work engagement that is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p. 74). They in turn may exhibit desirable outcomes (Bakker et al., 2012). In empirical terms, Van Wingerden et al. (2016) reported that the job demands-resources intervention in the form of improving personal resources and job crafting engendered work engagement and in-role performance. Brenninkmeijer and Hekkert-Koning (2015) found that both increasing structural job resources and increasing social job resources positively influenced work engagement.

Job crafting is a critical strategy for both managerial and non-managerial employees because the ones who craft their jobs “... are about changing the job in order to experience enhanced meaning of it” (Bakker, 2010, p. 239). Flight attendants may seek structural job resources to learn new things. For example, they may be in need of more autonomy and knowledge about the job. They

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may seek social job resources. Specifically, they may ask for support from their coworkers and pursers as well as feedback concerning their current job performance. They may also seek and accept more responsibility for personal growth and achievement (increasing challenging job demands). The ones who have the opportunity to make changes in their jobs are more engaged in their work, remain with the organization, and perform better at work (cf. Bakker, 2010; Bakker et al., 2012).

Grounded in this backdrop, our study develops and tests a conceptual model (Fig. 1) that investigates the outcomes of job crafting among flight attendants. Specifically, our study gauges the influence of job crafting, as manifested by increasing structural job resources, increasing social job resources, and increasing challenging job demands, on quitting intentions and service recovery performance. Work engagement is treated as a mediator in the aforementioned relationships.

2. Relevance and contribution of the empirical study

We intend to make several contributions to current knowledge on job crafting. First, employees who are able to optimize their work environment by redesigning their job demands and resources are more engaged in their work (Bakker et al., 2012). Changes in job resources activate employees' work engagement (Schaufeli et al., 2009). According to Demerouti (2014), "...job crafting occurs in demanding, resourceful and changing work environments by employees who are proactive, motivated by growth, or who experience misfit between their motivational style and the environmental cues" (p. 241). Customer-contact employees, including flight attendants, try to fulfill the requirements of their jobs in such work environments. There seems to be convincing evidence regarding the impact of job crafting on work engagement (e.g., Bakker et al., 2012; Tims et al., 2015; Van Wingerden et al., 2017; Vogt et al., 2016). However, empirical research about the relationship between these two constructs among customer-contact employees is scarce (cf. Chen et al., 2014; Siddiqi, 2015). Work engagement is still

a critical topic in the airline industry since companies aim to retain flight attendants who can meet both management and passenger expectations (cf. Ilkhanizadeh and Karatepe, 2017; Karatepe and Talebzadeh, 2016). With this stated, our study gauges the association between job crafting and work engagement among flight attendants. This is relevant and significant because flight attendants' simultaneous focus on increasing structural job resources, increasing social job resources, and increasing challenging job demands will enhance their work engagement. Otherwise, emphasis on one of these indicators in the process of job crafting may give rise to failure.

Second, Demerouti (2014) discusses that more research has focused on the association between job crafting and work engagement. Yet there are limited empirical studies on the consequences of job crafting (Demerouti, 2014). Similarly, what is known about the influence of job crafting on job outcomes among customer-contact employees is sparse (cf. Cheng et al., 2016; Siddiqi, 2015). Therefore, our study tests the influence of job crafting on quitting intentions and service recovery performance.

There are several reasons why our study chose propensity to leave and service recovery performance as the outcomes of job crafting. Specifically, the airline industry is still beset with the flight attendant turnover conundrum (cf. Chen and Kao, 2011). Ascertaining the factors that alleviate quitting intentions is important (Moon et al., 2013) because flight attendants with proclivity to leave the organization impede successful service delivery and engender poor services.

The definition for service recovery performance used in our study is as follows: "...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). Service recovery performance is still a hot topic (Punjaisri et al., 2013; Van Vaerenbergh et al., 2014) and a critical outcome for ground staff and flight attendants (Karatepe and Choubtarash, 2014; Karatepe and Talebzadeh, 2016). Recent research reveals that there are limited studies on the influence of job crafting on different types of

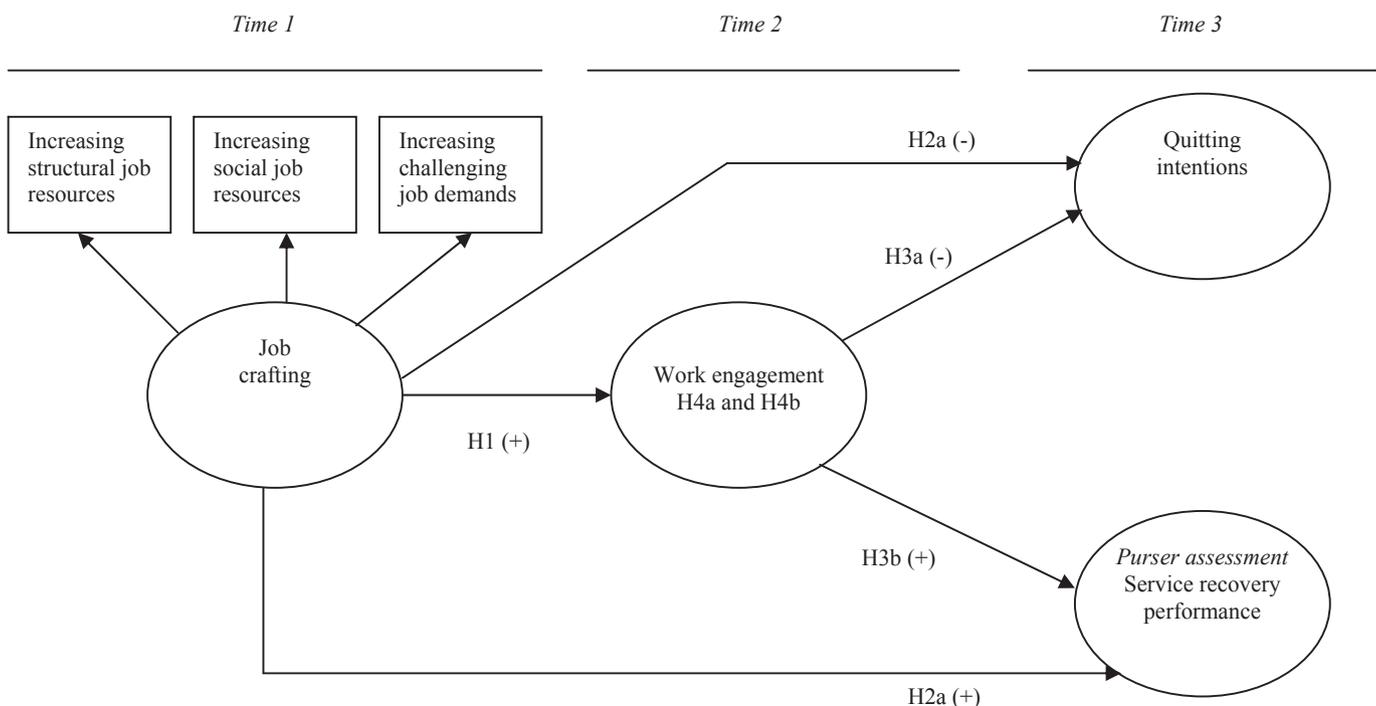


Fig. 1. Conceptual model.

employee performance such as adaptive performance (Peeters et al., 2016). This is also valid for the association between job crafting and service recovery performance.

Chou (2015) stresses that service recovery is the most critical strategy implemented by airline companies. When successfully implemented, service recovery can give rise to a number of desirable outcomes such as positive word-of-mouth communication and repurchase behaviors (Choi et al., 2014). According to Van Vaerenbergh's et al. (2014) meta-analytic study, service recovery performance is strongly predicted by job motivational factors. Work engagement is a proximal variable to employees' performance (Breevaart et al., 2015; Menguc et al., 2013). It has been demonstrated that customer-contact employees improve their own service recovery performance by learning from recovery situations or cases (Van der Heijden et al., 2013). This can also be done through job crafting.

Third, work engagement is treated as the linkage between job crafting and quitting intentions and service recovery performance. Not much research has tested the underlying mechanism linking job crafting to employee outcomes (Esteves and Lopes, 2017). Siddiqi's (2015) study conducted with bank employees highlights the gap that empirical research on work engagement linking job crafting to outcomes among customer-contact employees is scarce. Flight attendants are supposed to offer successful service recovery to passengers and contribute to relationship quality between the company and passengers (Hvass and Torfadóttir, 2014; Park and Park, 2016). To achieve these, flight attendants should be involved in the redesign of their jobs so that they can intervene to prevent undesirable job outcomes (cf. Tims et al., 2015). It is the simultaneous implementation of increasing structural job resources, increasing social job resources, and increasing challenging job demands that is likely to have a significant influence on flight attendants' work engagement and therefore on propensity to leave and service recovery performance. Lastly, the results of our empirical investigation conducted with flight attendants will offer practical implications for both managerial and non-managerial employees in the airline industry.

3. Theoretical framework and hypotheses

3.1. Theoretical framework

JD-R theory delineates guidance to develop hypotheses pertaining to the interrelationships of job crafting, work engagement, quitting intentions, and service recovery performance. One of the propositions of JD-R theory is that all job characteristics within a work environment can be categorized in job demands or job resources (Bakker and Demerouti, 2016; Tims et al., 2012). Job demands refer to "those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs...", while job resources refer to "those physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands at the associated physiological and psychological costs; (c) stimulate personal growth and development" (Demerouti et al., 2001, p. 501). Work overload and emotional dissonance are examples of job demands, while autonomy and rewards are examples of job resources.

The health-impairment and motivational processes represent another proposition in JD-R theory. Basically, job demands lead to burnout that in turn engender undesirable employee outcomes, while job resources activate work engagement that in turn results in positive employee outcomes (Bakker and Demerouti, 2008, 2016). Specifically, Schaufeli and Bakker (2004) documented that

job demands influenced burnout, leading to both health problems and proclivity to quit. They further indicated that job resources fostered work engagement and therefore reduced quitting intentions. In a study of cabin crew, Chen and Chen (2012) reported similar findings.

Another proposition in JD-R theory is that motivation enhances job performance, while job strain mitigates job performance (Bakker and Demerouti, 2016). Employees high on work engagement are goal-oriented, are energetic, and focus more on their tasks, while the ones with elevated levels of burnout do not possess energetic resources to reach their goals (Bakker and Demerouti, 2016). Broadly speaking, Karatepe (2013a) documented that highly engaged customer-contact employees displayed in- and extra-role performances at elevated levels. Janssen et al. (2010) showed that emotional exhaustion exerted a detrimental effect on job performance and organizational citizenship behaviors.

The proposition associated with job crafting in JD-R theory is that employees can craft their jobs using job resources and challenging job demands. Both job resources and challenging job demands can activate employees' growth and development and enable them to reach future gains (Bakker and Demerouti, 2008; Crawford et al., 2010). Such employees show proactive behaviors by increasing their job resources and challenging job demands and stay motivated (Bakker and Demerouti, 2016). Consequently, employees who are able to craft their jobs are highly motivated to exhibit better performance. As also stated by Bakker and Demerouti (2016), "...engaged employees can create their own "gain spiral" of resources and work engagement through job crafting" (p. 4). Tims et al. (2013) conclude that job crafting leads to positive changes in the work environment. Evidence reveals that job crafting in the form of increasing structural job resources, increasing social job resources, and increasing challenging job demands stimulate work engagement (Bakker et al., 2012). Recent evidence also supports this relationship (Van Wingerden et al., 2016).

In light of JD-R theory, our study proposes that job crafting boosts flight attendants' work engagement and service recovery performance and mitigates their propensity to quit. Our study also contends that highly engaged flight attendants manage service recovery efforts successfully and display lower quitting intentions. As can be inferred from these relationships, work engagement links job crafting to quitting intentions and service recovery performance. The hypotheses are discussed below.

3.2. Hypotheses

Using JD-R theory as the theoretical framework, our study contends that work engagement is one of the potential outcomes of job crafting (Bakker and Demerouti, 2016). When flight attendants have the opportunity to craft their jobs through job resources and challenging job demands, they feel vigorous, are inspired by their work, and have full concentration on their work. When crafting their jobs, they may request assistance and advice from their colleagues and pursers, may be interested in receiving new/additional assignments, may ask for authority to respond to passenger needs and problems on the spot, and may increase their job demands when they perceive them as a potential for growth and development (cf. Brenninkmeijer and Hekkert-Koning, 2015; Tims et al., 2012). In empirical terms, Petrou et al. (2012) demonstrated that day-level seeking challenges positively influenced day-level work engagement. Tims's et al. (2015) and Vogt's et al. (2016) studies reported that crafting job resources led to higher work engagement. Harju et al. (2016) documented that seeking challenges activated work engagement.

Employees who are able increase their structural and social job resources as well as challenging job demands are likely to report

desirable outcomes such as better performance at work and low levels of quitting intentions. The presence of frequent service failures makes service recovery important in the airline industry (cf. Hvass and Torfadóttir, 2014; Karatepe and Talebzadeh, 2016). Employees are expected to have effective service recovery performance through spontaneous and impromptu actions (Punjaisri et al., 2013). As proposed in JD-theory, employees use job crafting behaviors since their work motivates them (Bakker and Demerouti, 2016). Such employees also appear to intend to remain in the organization because of two reasons. First, they view their organization as a place in which they can utilize their skills and develop them (Brenninkmeijer and Hekkert-Koning, 2015). Second, they create a resourceful and challenging work environment through job crafting behaviors and do the job they like (cf. Vogt et al., 2016).

Though limited, there are empirical studies about the association between job crafting and job performance. However, this does not seem to be valid for the relationship between job crafting and quitting intentions. For instance, Weseler and Niessen (2016) found that extended task crafting activated task performance, while reduced relationship crafting mitigated task performance. Van Wingerden's et al. (2016) study showed that job crafting enhanced employees' job performance.

Therefore, we hypothesize that:

H1. Flight attendants' perceptions of job crafting will exert a positive influence on their work engagement.

H2. Flight attendants' perceptions of job crafting will exert a negative influence on their (a) quitting intentions and a positive influence on their (b) service recovery performance.

Work engagement is a proximal concept to customer-contact employees' performance in the workplace (Menguc et al., 2013). There are at least two reasons for such a relationship. First, engaged employees perform better than the ones who are not engaged. This is due to the fact that highly engaged employees experience positive emotions, possess better health, and transfer their engagement to others in their immediate work environment (Bakker, 2011). Second, employees' level of work engagement influences how they behave and interact with customers (Menguc et al., 2013). Extra-role behaviors are the requirements associated with a successful service recovery performance (De Jong and De Ruyter, 2004) and the ones who are expected to exhibit such behaviors are likely to create and invest resources of their immediate environment (Demerouti et al., 2015). It is reported that the higher engaged employees are, the higher they exhibit in-role and extra-role performances (Reijseger et al., 2016). In empirical terms, there are various studies supporting the premise that work engagement is a significant determinant or a strong predictor of customer-contact employees' in-role performance and/or extra-role performance (e.g., Auh et al., 2016; Breevaart et al., 2015; Chen and Kao, 2012; Xanthopoulou et al., 2008; Yeh, 2012). In Bakker and Demerouti's (2008) study, work engagement is also shown as a proximal construct to performance-related variables (e.g., creativity, extra-role performance).

As proposed in JD-R theory, flight attendants are able to respond to passenger needs and complaints effectively when they are energetic, inspired by work, and are fully immersed in their work. Such flight attendants also exhibit reduced intentions to quit. A synthesis of the literature that consists of empirical studies conducted with customer-contact employees provides support for such assertion. For instance, Chen and Kao (2012) reported that work engagement boosted flight attendants' job performance. Karatepe and Talebzadeh's (2016) study conducted with flight attendants showed a positive association between work engagement and service recovery performance. Evidence borrowed from the

healthcare industry indicated that service recovery performance was a critical behavioral outcome for work engagement (Kim and Oh, 2012), while work engagement mitigated propensity to leave (Caesens et al., 2016). Therefore, we postulate the following hypotheses:

H3. Flight attendants' perceptions of work engagement will exert a negative influence on their (a) quitting intentions and a positive influence on their (b) service recovery performance.

The previously stated hypotheses suggest that work engagement mediates the influence of job crafting on proclivity to quit and service recovery performance. As proposed in JD-R theory, crafting job resources and challenging job demands lead to work engagement that in turn engenders desirable outcomes (Bakker et al., 2012; Bakker and Demerouti, 2016). Flight attendants can enhance their work engagement and service recovery performance via job crafting behaviors (cf. Tims et al., 2015) and display lower proclivity to quit.

Though limited, the extant literature presents evidence about work engagement as a mediator. Specifically, Tims et al. (2015) showed that work engagement linked crafting job resources and challenging job demands to task performance. Bakker et al. (2012) documented that job crafting influenced task performance only via work engagement. In Van Wingerden's et al. (2017) study, job crafting influenced employee performance directly and indirectly through work engagement. Van Wingerden et al. (2016) also reported that work engagement partly mediated the influence of job crafting on job performance. Accordingly, we hypothesize that:

H4. Work engagement will function as a mediator between (a) job crafting and quitting intentions and between (b) job crafting and service recovery performance.

4. Method

4.1. Participants and data collection

Data were collected from flight attendants and their pursers in Iran. The researcher received information from the Iran Civil Aviation Organization at the time of this study and found that thirteen private airline companies in Iran had domestic and/or international flights. The researcher contacted these companies through a letter that explained the objectives of the empirical investigation and requested permission for data collection. However, the researcher obtained permission from management of only three airline companies.

Our study deployed several procedural remedies to minimize common method bias. First, data were collected two weeks apart in three waves between each measurement (i.e., job crafting, work engagement, and quitting intentions) (Podsakoff et al., 2012). Second, flight attendants' service recovery performance was assessed by their pursers. This data collection is also in agreement with recent studies (e.g., Choi et al., 2014; Karatepe and Talebzadeh, 2016; Karatepe and Vatankhah, 2014).

Four different questionnaires were used in our study. Broadly speaking, the Time 1 questionnaire included the increasing structural job resources, increasing social job resources, and increasing challenging job demands measures and items about respondents' profile. The Time 2 questionnaire consisted of the work engagement measure and the Time 3 questionnaire contained the quitting intentions measure. The service recovery performance measure was in the purser questionnaire. Each of these questionnaires had a cover page that explained the purpose of the study and guaranteed anonymity and confidentiality. This cover page indicated that there

were no right or wrong responses to the items. It further showed that participation was voluntary but encouraged and management fully endorsed participation. All flight attendants filled out the questionnaires during their briefing time in the central building of their company (Karatepe and Vatankhah, 2014). Each flight attendant placed the Time 1 questionnaire in an envelope, sealed the envelope and then put it in a designated box. This procedure was repeated for the Time 2, Time 3, and purser questionnaires. The researcher used identification codes to match the questionnaires with each other.

One hundred and sixty-eight Time 1 questionnaires were submitted to flight attendants through managers in each airline company. One hundred and fifty-five questionnaires were returned. One hundred and fifty-five Time 2 questionnaires were distributed to these flight attendants. One hundred and forty Time 2 questionnaires were obtained. Then 140 Time 3 questionnaires were distributed. As a result, 121 Time 3 questionnaires were returned. The response rate was 72% (121/168). The researcher also gathered 121 questionnaires from pursers. The demographic breakdown of the sample is given in Table 1.

4.2. The measuring instruments

Job crafting was measured with a validated instrument that consisted of 15 items (Tims et al., 2012). Broadly speaking, increasing structural job resources, increasing social job resources, and increasing challenging job demands each consisted of five items. The same instrument was also utilized in various empirical studies (e.g., Bakker et al., 2012; Tims et al., 2015, 2016). Sample items for increasing structural job resources are “I try to develop my capabilities” and “I try to develop myself professionally”. Sample items for increasing social job resources include “I ask my purser to coach me” and “I ask whether my purser is satisfied with my work”, while sample items for increasing challenging job demands are “When an interesting assignment comes along, I offer myself proactively as assignment coworker” and “If there are new developments, I am one of the first to learn about them and try them out”. Flight attendants responded to the job crafting statements using a five-point scale (1 = *never*, 5 = *very often*). Coefficient alpha

for increasing structural job resources, increasing social job resources, and increasing challenging job demands in our study was 0.78, 0.88, and 0.78, respectively.

Work engagement was measured via nine items (Schaufeli et al., 2006). These items came from the validated version of the shortened Utrecht work engagement scale. There are plenty of empirical studies that have assessed work engagement through the aforementioned scale (Harju et al., 2016; Karatepe and Talebzadeh, 2016; Reijseger et al., 2016; Xanthopoulou et al., 2008). Sample items are “I am enthusiastic about my job”, “When I get up in the morning, I feel like going to work”, and “I feel happy when I am working intensely”. Flight attendants responded to the work engagement statements via a seven-point scale (0 = *never*, 6 = *always*). Coefficient alpha for work engagement was 0.93.

Another validated scale contained three items for the assessment of quitting intentions (Singh et al., 1996). Sample items include “It is likely that I will actively look for a new job next year” and “I often think about quitting”. These items were also used in similar studies (e.g., Karatepe, 2013b; Karatepe and Choubtarash, 2014). Flight attendants also provided responses to the quitting intentions items by using a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Coefficient alpha for quitting intentions was 0.94.

Service recovery performance was operationalized with a validated measure that included five items (Bosshoff and Allen, 2000). Sample items for service recovery performance are “Considering all the things this flight attendant does, he/she handles dissatisfied passengers quite well” and “No passenger this flight attendant deals with leaves with problems unresolved”. This validated scale was also utilized in other studies (e.g., Ashill et al., 2009; Karatepe and Talebzadeh, 2016). For assessing flight attendants' service recovery performance, the pursers responded to the items using a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). Coefficient alpha for this scale was 0.90.

All questionnaires were prepared via the back-translation method. Our study deployed four different pilot studies. Specifically, each questionnaire at Time 1, Time 2, and Time 3 was pre-tested with five flight attendants. The purser questionnaire was also pre-tested with five pursers. There was no need to make changes in each questionnaire because none of the flight attendants and their pursers reported difficulty understanding the statements in the questionnaires.

Table 1
Respondents' profile (n = 121).

	# of respondents	Percentage
<i>Age</i>		
18–27	36	29.8
28–37	68	56.2
38–47	15	12.4
48–57	2	1.6
<i>Gender</i>		
Male	48	39.7
Female	73	60.3
<i>Education</i>		
Secondary and high school	3	2.4
Two-year college degree	18	14.9
Four-year college degree	70	57.9
Graduate degree	30	24.8
<i>Organizational tenure</i>		
Less than 1 year	10	8.3
1–5	48	39.7
6–10	42	34.7
11–15	18	14.9
16–20	1	0.8
Longer than 20 years	2	1.6
<i>Marital status</i>		
Single or divorced	83	68.6
Married	38	31.4

4.3. Data analysis

Our study employed a series of confirmatory factor analyses to ascertain the factor structure of job crafting. This was deemed necessary because the job crafting scale has not been tested among flight attendants in the Iranian setting before. Therefore, the three-factor model was compared with one-factor model and the three different two-factor models based on the chi-square difference test, comparative fit index (CFI), parsimony normed fit index (PNFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Internal consistency reliabilities for each indicator of job crafting were computed (Bagozzi and Yi, 1988; Nunnally, 1978).

The relationships were then assessed using structural equation modeling. Before this, the partially mediated model was compared with the fully mediated model through the χ^2 difference test. The mediating effects were tested based on the Sobel test. Covariance matrices were used as inputs in LISREL 8.30 to test the factor structure of job crafting and assess the hypotheses (Joreskog and Sorbom, 1996).

5. Results

5.1. Measurement results

The results of confirmatory factor analysis demonstrated that the three-factor model was superior to the single-factor model as well as the three different two-factor models (see Table 2). Accordingly, the results presented in Table 3 provided support for the three-factor model for job crafting based on the following model fit statistics: $\chi^2 = 156.99$, $df = 87$; $\chi^2/df = 1.81$; CFI = 0.91; PNFI = 0.68; RMSEA = 0.082; SRMR = 0.074. Ten out of 15 items had loadings greater than 0.70. The average variance extracted by increasing structural job resources, increasing social job resources, and increasing challenging job demands was 0.46, 0.60, and 0.43, respectively. Though the average variances extracted by the two indicators of job crafting were below 0.50, the model fit statistics as well as significant loadings indicated that the measures possessed convergent validity (Anderson and Gerbing, 1988).

Since none of the shared variances between pairs of constructs was larger than the average variance extracted by each latent variable, all variables were distinct from one another and therefore discriminant validity was corroborated (Fornell and Larcker, 1981). As reported before, coefficient alpha for each indicator of job crafting was larger than 0.70. Composite reliability for each latent variable was also above 0.60 (Table 3). These findings revealed that the measures were reliable (Bagozzi and Yi, 1988; Nunnally, 1978).

Table 4 presents summary statistics as well as correlations of observed variables.

5.2. Structural model

Normality of the data was checked through skewness. The skewness value for increasing structural job resources, increasing social job resources, increasing challenging job demands, work engagement, quitting intentions, and service recovery performance was -1.11, -0.67, -0.31, -0.97, 0.27, and -0.27, respectively. All values (<3.0) were deemed acceptable (Kline, 2011). A comparison between the fully mediated ($\chi^2 = 290.27$, $df = 161$) and partially mediated ($\chi^2 = 273.27$, $df = 159$) models was made based on the χ^2 difference test. The result was significant ($\Delta\chi^2 = 17.0$, $\Delta df = 2$). Therefore, the partially mediated model (Fig. 2) was used to assess the hypothesized effects. The partially mediated model fit the data well ($\chi^2 = 273.27$, $df = 159$; $\chi^2/df = 1.72$; CFI = 0.92; PNFI = 0.71; RMSEA = 0.077; SRMR = 0.076).

Consistent with our prediction, job crafting exerts a strong positive influence on work engagement ($\gamma_{11} = 0.59$, $t = 5.78$). Hence, the empirical data support Hypothesis 1. As for the association between job crafting and quitting intentions and service recovery performance, the results indicate that job crafting depicts a significant positive relationship with service recovery performance ($\gamma_{31} = 0.43$, $t = 3.06$), while job crafting does not significantly influence quitting intentions ($\gamma_{21} = -0.16$, $t = -1.28$). Hypothesis 2b

Table 2
Model comparison results for job crafting.

Model	χ^2	df	CFI	PNFI	RMSEA	SRMR	$\Delta\chi^2$	Δdf
One-factor model	416.83	90	0.67	0.52	0.174	0.11	259.84	3
Two-factor model (increasing structural job resources and increasing social job resources, increasing challenging job demands)	306.84	89	0.77	0.59	0.143	0.10	149.85	2
Two-factor model (increasing social job resources and increasing challenging job demands, increasing structural job resources)	296.61	89	0.79	0.60	0.139	0.11	139.62	2
Two-factor model (increasing structural job resources and increasing challenging job demands, increasing social job resources)	253.18	89	0.82	0.63	0.124	0.084	96.19	2
Three-factor model	156.99	87	0.91	0.68	0.082	0.074	–	–

Note: χ^2 = Chi-square; df = degrees of freedom; $\Delta\chi^2$ = Delta chi-square; Δdf = Delta degrees of freedom; CFI = Comparative fit index; PNFI = Parsimony normed fit index; RMSEA = Root mean square error of approximation; SRMR = Standardized root mean square residual. The three-factor model for job crafting that is represented by increasing structural job resources, increasing social job resources, and increasing challenging job demands was superior to the one-factor model and the three different two-factor models based on the results of $\Delta\chi^2$ ($p < 0.01$), CFI, PNFI, RMSEA, and SRMR.

Table 3
Scale items and confirmatory factor analysis results for the three-factor model of job crafting.

Scale items	Loadings	t-value	AVE	CR	Alpha
<i>Increasing structural job resources</i>			0.46	0.80	0.78
I try to develop my capabilities	0.76	9.25			
I try to develop myself professionally	0.85	10.82			
I try to learn new things at work	0.73	8.74			
I make sure that I use my capacities to the fullest	0.60	6.75			
I decide on my own how I do things	0.35	3.72			
<i>Increasing social job resources</i>			0.60	0.88	0.88
I ask my purser to coach me	0.76	9.35			
I ask whether my purser is satisfied with my work	0.81	10.30			
I look to my purser for inspiration	0.82	10.52			
I ask others for feedback on my job performance	0.73	8.91			
I ask colleagues for advice	0.76	9.47			
<i>Increasing challenging job demands</i>			0.43	0.79	0.78
When an interesting assignment comes along, I offer myself proactively as assignment coworker	0.78	9.35			
If there are new developments, I am one of the first to learn about them and try them out	0.65	7.41			
When there is not much to do at work, I see it as a chance to start new assignments	0.65	7.29			
I regularly take on extra tasks even though I do not receive extra salary for them	0.41	4.25			
I try to make my work more challenging by examining the underlying relationships between aspects of my job	0.74	8.70			
Model fit statistics: $\chi^2 = 156.99$, $df = 87$; $\chi^2/df = 1.81$; CFI = 0.91; PNFI = 0.68; RMSEA = 0.082; SRMR = 0.074					

Note: All loadings are significant at the 0.01 level or better. 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.

Table 4
Summary statistics and correlations of observed variables.

Variables	1	2	3	4	5	6
1. Increasing structural job resources	–					
2. Increasing social job resources	0.495**	–				
3. Increasing challenging demands	0.516**	0.445**	–			
4. Work engagement	0.447**	0.381**	0.458**	–		
5. Quitting intentions	–0.301**	–0.237**	–0.171	–0.400**	–	
6. Service recovery performance	0.305**	0.071	0.357**	0.272**	–0.202*	–
Mean	4.19	3.73	3.64	4.45	2.59	3.68
Standard deviation	0.70	1.04	0.89	1.16	1.28	0.84

Note: * $p < 0.05$, ** $p < 0.01$ (two-tailed test).

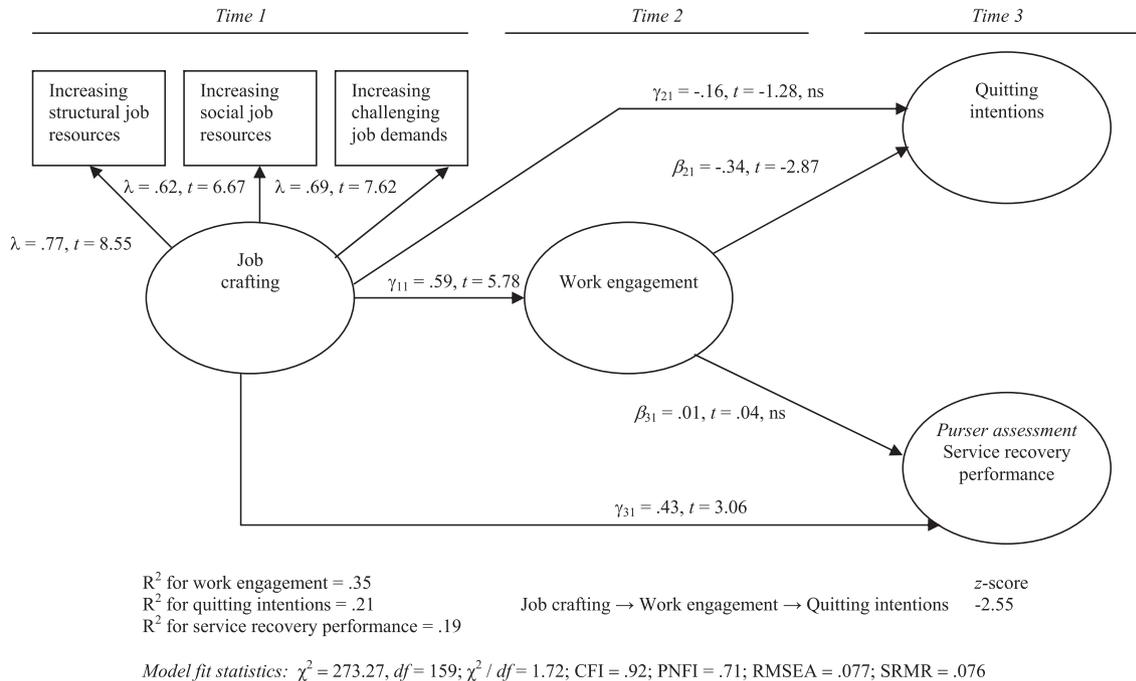


Fig. 2. Model test results.

receives support from the empirical data, whereas there is no empirical support for Hypothesis 2a. The results support Hypothesis 3a but do not support Hypothesis 3b. That is, work engagement is significantly associated with quitting intentions ($\beta_{21} = -0.34, t = -2.87$), whereas the empirical data do not lend any credence to the association between work engagement and service recovery performance ($\beta_{31} = 0.01, t = 0.04$).

The findings based on the Sobel test illustrate that work engagement fully mediates the association between job crafting and quitting intentions ($z = -2.55$), thereby supporting Hypothesis 4a. However, the non-significant association between work engagement and service recovery performance also leads to conclusion that work engagement does not function as a mediator between job crafting and service recovery performance. It appears that flight attendants do engage in job crafting behaviors—they proactively optimize their jobs. The results explain 35% of the variance in work engagement, 21% in quitting intentions, and 19% in service recovery performance.

6. Discussion

Our study examined the consequences of job crafting among flight attendants. Specifically, our study investigated the interrelationships of job crafting, work engagement, quitting intentions, and service recovery performance as well as the mediating role of work engagement through data obtained from flight attendants and their pursers in Iran. We utilized a three-wave design with a two-week time lag between each wave. Of the seven hypotheses we assessed, four received support from the empirical data.

Consistent with the proposition in JD-R theory (Bakker and Demerouti, 2016), job crafting activates flight attendants' work engagement and service recovery performance. Again in line with the proposition in JD-R theory (Bakker and Demerouti, 2016), work engagement reduces quitting intentions. Flight attendants' job crafting behaviors also influence quitting intentions through work engagement. As aptly discussed by Bakker and Demerouti (2016), employees can create their own resources and work engagement via job crafting. When crafting their jobs via job resources and challenging job demands, flight attendants can obtain additional

social support from their pursers and colleagues and receive autonomy and new assignments (cf. Vogt et al., 2016). In such an environment, they feel energetic and dedicated and are absorbed by their work. They are also ready to manage passenger needs and problems via spontaneous and impromptu actions (cf. Punjaisri et al., 2013). The ones who are ready to take the personal initiative for job crafting are highly engaged in their work and therefore exhibit lower quitting intentions (cf. Brenninkmeijer and Hekkert-Koning, 2015).

In contrast, the findings illustrate that work engagement does not significantly influence service recovery performance. This is surprising. This finding contrasts the idea that work engagement is a proximal construct to employees' performance outcomes. This is not congruent with the proposition in JD-R theory and recent evidence that highly engaged employees are better performers at work (Bakker and Demerouti, 2016; Reijseger et al., 2016). Two plausible explanations can be given. First, flight attendants perceive that job crafting is an important mechanism which enables them to redesign their jobs and therefore display successful service recovery in the workplace. When they redesign their jobs via challenging job demands, they focus on new assignments or additional tasks. When they redesign their jobs through increasing structural job resources and/or increasing social job resources, they take advantage of social support emerging from colleagues and/or pursers and autonomy delegated in order to manage passenger needs and problems successfully. Under these circumstances, they may meet and/or exceed passenger expectations by taking personal initiative.

Second, we re-tested the relationship between work engagement and service recovery performance without the inclusion of job crafting in the model. The result was significant. This implicitly reveals that job crafting attenuated the impact of work engagement on service recovery performance. Further, the finding that work engagement does not act as a mediator between job crafting and service recovery performance is not in line with the works of Tims et al. (2015) and Van Wingerden et al. (2016).

7. Conclusion

7.1. Theoretical contributions

Our study makes several contributions to the extant knowledge base in the following ways. First, our study gauges the association between job crafting and work engagement based on the proposition in JD-R theory (Bakker and Demerouti, 2016). Testing this relationship among flight attendants is relevant and significant because job crafting should be well understood among employees who work in a challenging environment and are motivated by growth or find that there is misfit between their motivational style and the organizational practices (Demerouti, 2014). Flight attendants may need to increase both structural and social job resources and may be willing to increase challenging job demands for growth and development. Considering work engagement as one of the outcomes of job crafting is also relevant and significant due to the fact that it is still a critical topic in the aviation industry where managers are in need of retention of flight attendants who are highly engaged in their work (cf. Ilkhanizadeh and Karatepe, 2017; Karatepe and Talebzadeh, 2016).

Second, again using the proposition in JD-R theory (Bakker and Demerouti, 2016), our study tests the effect of job crafting on quitting intentions and service recovery performance. Similar to the first contribution, evidence about the influence of job crafting on job outcomes is scanty (cf. Cheng et al., 2016; Demerouti, 2014; Siddiqi, 2015). This is also evident about the effect of job crafting on different types of employee performance (Peeters et al., 2016). Our study enhances the understanding that job crafting is a significant

predictor of service recovery performance. Highly engaged flight attendants are motivated to exhibit positive job outcomes via their job crafting behaviors.

Third, consistent with the proposition in JD-R theory (Bakker and Demerouti, 2016), our study contributes to the extant knowledge base by linking job crafting to the abovementioned outcomes via work engagement. Such mediating relationships are critical since there is limited evidence pertaining to the underlying mechanism that links job crafting to employee outcomes (Esteves and Lopes, 2017; Siddiqi, 2015). The findings reveal that work engagement is a full mediator between job crafting and quitting intentions, while there is no empirical evidence about work engagement as a mediator between job crafting and service recovery performance. Since service recovery performance is essential in all service settings (e.g., Ashill et al., 2009; Babakus et al., 2003; Hvass and Torfadóttir, 2014; Van Vaerenbergh et al., 2014), future research should investigate the underlying mechanism that links job crafting to customer-contact employees' service recovery performance.

7.2. Practical implications

Our study conducted with flight attendants offers useful implications for business practice. First, any efforts about job crafting from the start are doomed to failure if management does not consider job crafting as a strategy that enables employees to contribute to organizational and personal goals (cf. Tims et al., 2013). Management should be aware of the effect flight attendants have on the work environment through job crafting behaviors. With this realization, management of airline companies should make sure that flight attendants are informed about job crafting opportunities and strategies and are motivated to contribute to the organization through their job crafting behaviors. In the workplace, flight attendants may be in need of more authority to respond to passenger needs and requests quickly. They may ask for advice from their colleagues to facilitate the decision making process. They may be interested in learning new things at work, and the pursers should be ready to give such information to these flight attendants. They can also go the extra-mile to make sure that passengers leave the company being satisfied with all services. The opportunities given to flight attendants to increase both structural and social job resources as well as challenging job demands make them become engaged in their work at elevated levels and exhibit lower quitting intentions and enable them to have a full concentration on challenging service encounters for successful service recovery.

Second, as discussed in other empirical studies, training customer-contact employees is a critical tool for ensuring successful service recovery in a number of service settings (e.g., bank, airline, and healthcare) (Babakus et al., 2003; Hvass and Torfadóttir, 2014; Karatepe and Choubtarash, 2014; Kim and Oh, 2012). Hence, management should arrange specific training programs to focus on how to foster flight attendants' service recovery performance. This is important because mistakes and failures are frequent occurrences in the airline industry and therefore flight attendants should always be trained about how to respond to passenger problems better. This can be done through *case studies* and *feedback* obtained from flight attendants about passengers' complaints.

Third, job crafting should not lead to relationship reduction among flight attendants. Otherwise, work intensity is likely to heighten job stress and as a result job crafting is unlikely to pay dividends. Therefore, managers should make sure that job crafting is not detrimental to flight attendants' health. They should arrange training programs to prevent isolation among team members (Weseler and Niessen, 2016).

7.3. Limitations and future research

There are several limitations that should be considered in the interpretation of the findings. However, these limitations delineate directions for future research. First, our study utilized a time-lagged design and multiple sources of data. This enabled us to control common method bias in this study (Podsakoff et al., 2012). However, such a design does not present evidence for the possible reversed effects. With this realization, in future studies using a cross-lagged panel design is likely to provide evidence concerning the possible reversed effects. For instance, job crafting may predict work engagement at Time 2 and work engagement may predict job crafting at Time 2 (cf. Harju et al., 2016). This is due to the fact that personality may act as a third variable and the working conditions may remain the same. In short, collecting data based on a cross-lagged panel design would present a better picture of the associations given in this study's conceptual model.

Second, our study used work engagement as a mediator between the indicators of job crafting and quitting intentions and service recovery performance. Job embeddedness that includes links, fit, and sacrifice is a critical employee retention strategy (Karatepe, 2013b; Karatepe and Vatankhah, 2014) and can be used as an underlying mechanism linking job crafting to quitting intentions and service recovery performance. Investigating these associations among flight attendants can expand existing knowledge on job crafting. Third, our study showed that work engagement did not significantly affect service recovery performance. Therefore, future research can use passengers' perceptions of service quality/service performance as one of the outcomes of work engagement (cf. Menguc et al., 2013) and test work engagement as a mediator between job crafting and service quality/service performance.

Fourth, the relationships depicted in the conceptual model can be gauged through data from different service settings such as hotels and restaurants. Such a study is likely to broaden the database pertaining to job crafting and its consequences. In closing, it is apparent that there is a need for empirical research concerning the consequences of job crafting among customer-contact employees. With this stated, we urge future studies to focus more on the consequences of job crafting (e.g., employee voice behavior, absenteeism, tardiness, leaving work early) using data to be gathered in a number of service settings.

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