



Service quality and non-salary mechanism for airline companies in Taiwan



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ABSTRACT

Based on the affective events theory (AET), this study demonstrates how family-supportive organization perceptions (FSOP) and psychological detachment predict strain symptoms (the need for recovery and emotional exhaustion) and how the strain symptoms influence service quality. With data collected by convenience sampling from 206 airline employees, our results show that FSOP negatively influence strain symptoms, while psychological detachment mediates the relation between FSOP and the need for recovery. Although the need for recovery has no significant relation with service quality, emotional exhaustion does have a significantly negative association with service quality. Our contributions are more comprehensive for the literature on human resources, organizational behavior, and airline transportation. Moreover, based on the theory, our research fills the gap between FSOP and service quality by adding the strain symptoms as important mediation variables. The results can also be put to practical use on employment policies, such as retaining excellent employees in an organization and increasing an organization's competition advantages. The results may also apply to human resource management (HRM) and present that improvement in service quality is the most important competitive ability for the airline industry.

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1. Introduction

Competition between airlines has recently become more severe with the service quality of airlines receiving more attention than ever before. High-quality service has become a de facto requirement for this industry (Park et al., 2004), as it helps companies gain and maintain customer loyalty, satisfaction, and retention (Hu et al., 2009). However, following the recent global economic downturn, most airlines are struggling to survive and are forced to reduce their costs and services as much as possible (Liou et al., 2015), making it imperative for airline managers to figure out how to improve service quality at a minimum cost. As a result, strong employee policies in air transport have become very crucial for delivering high-quality service.

Our study regards that family-supportive organization perceptions (FSOP) might play a key role in understanding strain symptoms and high-quality service. Some research studies have talked about service quality in Asia's airline industry, but they just

concentrate on tangible antecedent variables such as physical environment and access quality (Wu and Cheng, 2013), or the outcomes of service quality such as loyalty (Chen and Hu, 2013) and passengers' behavior intentions (Park et al., 2004). They seldom look into the psychological aspect to discuss how airlines' policies affect psychological conditions and how employees' psychological conditions influence high-quality service. Therefore, our study fills the gap to examine how FSOP, through the mechanism of strain symptoms, influence service quality. This study is timely in providing a greater understanding of the key antecedent factors for service quality by helping to plan future policies of the airline industry.

To improve our understanding of service quality in air transport, this paper takes the affective events theory (AET) as the theoretical foundation to support our framework. Moreover, we establish a model that simultaneously considers FSOP, psychological detachment, need for recovery, emotional exhaustion, and service quality, as Fig. 1 shows.

2. Theoretical background and hypotheses

The affective events theory (AET) demonstrates that employees

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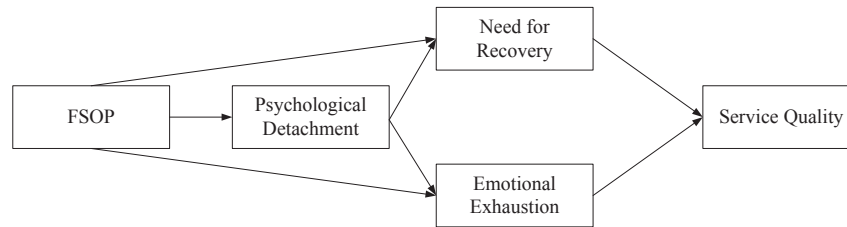


Fig. 1. Framework of this study.

react emotionally to things that happen to them at work, and this reaction influences their job performance and satisfaction (Robbins and Judge, 2011). This theory began with recognizing that emotions are a response to accidents in the work environment. Such work accidents trigger positive and negative emotional reactions, influencing a variety of performance and satisfaction variables. According to this theory, the emotions resulting from the accidents activate a series of follow-up reactions, such as job satisfaction and job performance. Therefore, more attention needs to be paid to the event since it will not only influence positive or negative emotions, but will also further influence performance. Moreover, this theory helps us understand how emotion influences employee reactions.

Our study uses FSOP on accidents in a working environment, tests whether or not FSOP influence psychological detachment and negative emotions' reactions, and further examines how negative emotions' reactions affect performance variables, such as service quality. When employees experience a friendly working environment for their family, it helps relieve negative emotion reactions and results in high-quality service. Consequently, based on AET our research views negative emotions as important mediators between FSOP and service quality and presents the hypotheses of our research as follows.

2.1. Effect of FSOP on psychological detachment

FSOP are global perceptions that employees form about how supportive their organization is to their families (Allen, 2001). The definition of FSOP has been elaborated to include the feeling that an employer is concerned with and facilitates employees' ability to meet work and family life expectations (Kossek et al., 2011). Specifically, FSOP refer to an employee's perception that his/her organization supports employees' family roles in ways such as providing time off to attend to the family, allowing them to talk about or address personal matters at work, etc. (Wayne et al., 2013). Psychological detachment is defined as an "individual's sense of being away from the work situation" (Etzion et al., 1998), implying that employees are not working at home and are not thinking about job-related problems or those brought about during after-work hours.

The role theory explains that multiple life roles result in an inter-role conflict, as individuals experience difficulty performing each role successfully due to conflicting demands (Kelly and Voydanoff, 1985). Research has found that when employees perceive their employer or organization as being more family-supportive, they report fewer work-to-family or role conflicts (Allen, 2001). Therefore, we regard that FSOP positively affect psychological detachment.

Hypothesis 1. *FSOP have a positive effect on psychological detachment.*

2.2. Strain symptoms

According to the literature, the need for recovery could be

viewed as an early stage of a strain process (Demerouti et al., 2007), and emotional exhaustion is an important variable of work-related strain (Gaines and Jermier, 1983). Sonnentag and Zijlstra (2006) described the need for recovery as "conceived as a conscious emotional state characterized by a temporal reluctance to continue with the present demands or to get new demands." Maslach et al. (2001) defined emotional exhaustion as "feelings of being over-extended and depleted of one's physical and emotional resources." During the past few decades, studies have concentrated on predicting the need for recovery and emotional exhaustion from workplace factors (De Croon et al., 2004; Sonnentag et al., 2010). Therefore, our study focuses on the need for recovery and emotional exhaustion as our strain symptoms.

2.2.1. FSOP as predictors of strain symptoms

Adequate support from an organization, like flexible working hours, allows employees more flexible time to effectively distribute their rest time, family time, or break time - that is, by being temporarily relieved from the demands imposed on them (Sonnentag and Zijlstra, 2006). Sonnentag and Zijlstra (2006) regarded that off-job demands (stemming from household and care responsibilities) also contribute to an individual's need for recovery due to fatigue and poor well-being. They also showed that adequate family support from an organization plays an important role in relieving fatigue and reducing the need for recovery.

Interpersonal aspects of work, including supportive leader behavior and group cohesiveness, have been postulated to decrease emotional exhaustion (Knudsen et al., 2006). When employees perceive positive support from a supervisor or organization, no matter towards family or work, it makes them feel more confident and likely to put forth more effort on their responsibilities. Therefore, having work benefits decreases emotional exhaustion. More concretely, support from the work domain - co-workers, employers, and the organization - as opposed to support from home is most strongly and negatively related to work stressors (Seiger and Wiese, 2009). Therefore, we suggest that FSOP negatively influence strain symptoms.

Hypothesis 2. *FSOP have a negative effect on the need for recovery.*

Hypothesis 3. *FSOP have a negative effect on emotional exhaustion.*

2.2.2. Psychological detachment as a predictor of strain symptoms

Sonnentag and Fritz (2007) regarded that psychological detachment from work should be a useful tool for recovery, because no further demands are made on functional systems called upon during work. Sonnentag et al. (2010) further suggested that psychological detachment negatively influences the need for recovery and emotional exhaustion. Accordingly, we regard that psychological detachment has a negative relation with the strain symptoms.

Hypothesis 4. *Psychological detachment has a negative effect on the need for recovery.*

Hypothesis 5. *Psychological detachment has a negative effect on emotional exhaustion.*

2.2.3. Effect of strain symptoms on service quality

A high need for recovery during non-work time implies that employees are strained due to dealing with work demands (Demerouti et al., 2007), thus hinting that a high need for recovery might influence work performance. Furthermore, a high need for recovery is associated with subjective health complaints and future sickness absence (De Croon et al., 2004). With bad health, employees are more easily distracted from work and the demands from customers and supervisors.

Previous literature also shows that emotional exhaustion is positively related with absenteeism, depression, dissatisfaction, etc., such that these negative consequences are not beneficial to service quality. Babakus et al. (1999) regarded that emotional exhaustion has a negative effect on organizational commitment. With lower commitment, employees do not think about extra solutions, have no enthusiasm for customers, and do not improve service quality. Hence, our study suggests that strain symptoms affect service quality negatively.

Hypothesis 6. *The need for recovery has a negative effect on service quality.*

Hypothesis 7. *Emotional exhaustion has a negative effect on service quality.*

3. Method

3.1. Samples and procedures

This study's data were collected by convenience sampling from employees in China Airlines, EVA Airways, and TransAsia Airways, which are the three major airline companies in Taiwan. The survey sample includes full-time personal, but excludes those working less than three months, since new employees are much less able to perceive support from organizations that early in their job and would be unable to display the relation exactly. The survey began on June 1, 2015, and our study collected all data from the participants until August 17, 2015. Participants were told through their supervisor that this research is just for academic purposes and that their information would be strictly confidential. Participation in the study was voluntary.

All survey measures were first translated from English into Chinese and then back-translated into English by a second translator, following the procedure recommended by Brislin (1980). The few discrepancies between the original English version and the back-translated version resulted in an adjustment in the Chinese translation based on direct discussions between the translators. A pilot study was then conducted to improve the research structure and content at first. Twenty questionnaires were sent to academicians who work in the business department of different universities, and another ten questionnaires were sent to managers in airline organizations. Several descriptions were revised based on the comments from academicians and managers, and all constructs have good reliability (coefficient alphas of FSOP, psychological detachment, emotional exhaustion, need for recovery, and service quality are 0.706, 0.805, 0.829, 0.847, and 0.950, respectively).

Our study examines CMV based on the steps of Williams et al. (2010). Our research employs consumer ethnocentrism as the marker variable, which is defined as a variable that is theoretically unrelated to substantive variables and for which its expected correlation with these substantive variables is zero (Lindell and Whitney, 2001). Table 1 shows the model fit results of our

Table 1
Chi-square, goodness-of-fit values, and model comparison tests.

| Model | χ^2 | d.f. | CFI |
|-----------------------------------|-----------------|-------------|---------------------------|
| 1. CFA | 1118.779 | 449 | 0.891 |
| 2. Baseline | 1126.542 | 458 | 0.892 |
| 3. Method-C | 1126.530 | 457 | 0.892 |
| Chi-square model comparison tests | | | |
| Δ Models | $\Delta \chi^2$ | Δ df | Chi-square critical value |
| Baseline vs. Method-C | 0.012 | 1 | 3.84 |

research for each model, containing chi-square, degrees of freedom, and Comparative Fit Index (CFI) values. We compare the Baseline model and Method-C model to test the null hypotheses that the method factor loadings (assumed to be equal) associated with the marker variable are not related to each of the 28 substantive indicators (Williams et al., 2010). The chi-square difference test between the Baseline and Method-C models suggests no support for rejecting the restriction to 0 of the 28 method factor loadings in the Baseline model. Simply speaking, there exists no serious CMV in our research.

Following those with incomplete answers and who had less than 3 months of work experience, 44 out of the 250 questionnaires were dropped (effective rate is 82.4%). Among respondents, males are 26.7% (55) and females 73.3% (151); the majority of the respondents are between the ages of 20 and 30 (61.7%); and 82.5% of respondents have master degrees.

3.2. Measures

This study measures the questionnaire items in this research using the 5-point Likert scale, with a 1 to 5 rating from strongly disagree to strongly agree.

FSOP. We assess FSOP with seven items from the original 14-item scale based on consultation with a scale author (Allen, 2001). A sample item is "Employees are given the opportunity to perform both their job and their personal responsibilities well". Coefficient alpha is 0.919.

Psychological detachment. We measure psychological detachment from work with the four-item scale developed by Sonnentag and Fritz (2007). A sample item is "During leisure time, I get a break from the demands of work." Coefficient alpha is 0.873.

Emotional exhaustion. We assess emotional exhaustion with five items from the Oldenburg Burnout Inventory (OLBI; Demerouti et al., 2001). This measure shows good validity by Halbesleben and Demerouti (2005). A sample item is "At work, I feel emotionally drained". Coefficient alpha is 0.954.

Need for recovery. We use the seven-item need for recovery scale developed by Van Veldhoven and Broersen (2003). This measure displays good predictive validity in previous research (De Croon et al., 2004). A sample item is "I find it difficult to relax at the end of a working day". Coefficient alpha is 0.935.

Service quality. Service quality is assessed with twenty-two items and composed of five dimensions (reliability, responsiveness, assurance, empathy, and tangibles) from Parasuraman et al. (1988). Coefficient alphas are 0.803, 0.914, 0.900, 0.889, and 0.883, respectively.

Control variable. In order to rule out alternative explanations for our findings, our study examines tenure as a control variable (i.e., tenure might influence service quality).

4. Results

4.1. Structural equation modeling

This study performs Structural Equation Modeling (SEM) analyses using a covariance matrix as input to the Analysis of Moment Structure software package (Arbuckle and Wothke, 2003), using Maximum Likelihood Estimation. We employ a two-step SEM approach, a measurement model, and a structural model to confirm the validity of the measures before examining the structural relation among constructs. Lastly, the study assesses the measurement model via evaluations of convergent validity and discriminant validity of the construct measures.

4.2. Reliability, convergent validity, and discriminant validity

Component reliability (CR) is conducted to confirm the level of reliability when constructing the CFA measurement model (listed in Table 2). The results show that the constructs' CR is higher than 0.7, meaning that all constructs have good reliability. The factor loading of each item corresponding to its construct shown in Table 2 is significantly large (Hair et al., 2010). In addition, the average variance extracted (AVE) of the latent constructs exceeds the recommended threshold value of 0.50 (Hair et al., 2010), ranging from 0.616 to 0.811, which signifies that more than half of the variances observed in the items is accounted for by their hypothesized constructs. Therefore, the current data have good convergent validity (Anderson and Gerbing, 1988).

Table 3 shows the mean scores, standard deviations' inter-correlations of the research variables, and the square root of AVE. The diagonal of Table 3 is the square root of AVE for each variable, which are all bigger than the inter-correlations of the variables, representing our study has good discriminant validity (Fornell and Larcker, 1981).

Table 2
Composite reliability and average variance extracted.

| Variable | Construct | Loading | t-value | CR | AVE |
|--------------------------|-----------|---------------|---------|-------|-------|
| FSOP | FSOP1 | 0.668 (0.064) | 10.437 | 0.917 | 0.616 |
| | FSOP2 | 0.710 (0.052) | 13.653 | | |
| | FSOP3 | 0.770 (0.046) | 16.739 | | |
| | FSOP4 | 0.875 (0.025) | 35 | | |
| | FSOP5 | 0.815 (0.032) | 25.468 | | |
| | FSOP6 | 0.882 (0.021) | 42 | | |
| | FSOP7 | 0.749 (0.042) | 17.833 | | |
| Psychological detachment | PD1 | 0.666 (0.050) | 13.32 | 0.863 | 0.625 |
| | PD2 | 0.962 (0.019) | 32.631 | | |
| | PD3 | 0.937 (0.015) | 6.246 | | |
| | PD4 | 0.506 (0.064) | 7.906 | | |
| Need for recovery | NFR1 | 0.760 (0.037) | 20.54 | 0.932 | 0.664 |
| | NFR2 | 0.817 (0.038) | 21.5 | | |
| | NFR3 | 0.866 (0.026) | 33.307 | | |
| | NFR4 | 0.841 (0.030) | 28.033 | | |
| | NFR5 | 0.868 (0.024) | 31.166 | | |
| | NFR6 | 0.721 (0.044) | 16.386 | | |
| | NFR7 | 0.824 (0.031) | 26.58 | | |
| Emotional exhaustion | EE1 | 0.877 (0.021) | 41.761 | 0.955 | 0.811 |
| | EE2 | 0.830 (0.027) | 30.74 | | |
| | EE3 | 0.924 (0.018) | 51.333 | | |
| | EE4 | 0.925 (0.015) | 61.666 | | |
| | EE5 | 0.942 (0.011) | 85.636 | | |
| Service quality | SQ1 | 0.756 (0.038) | 15.72 | 0.93 | 0.728 |
| | SQ2 | 0.771 (0.039) | 31.17 | | |
| | SQ3 | 0.924 (0.018) | 29.18 | | |
| | SQ4 | 0.923 (0.019) | 10.38 | | |
| | SQ5 | 0.877 (0.023) | 10.14 | | |

Note: Family-supportive organization perceptions (FSOP).

4.3. Goodness-of-fit

Results delineated in the measurement model were subject to testing and found to be valid. Next, we examine the fit indices in order to evaluate the structural model in SEM. Based on Table 4, the fit of our five-factor model to the data is fairly good: the chi-square value is 1.572, or less than 2, indicating an acceptable fit. The Normed-fit index, Tucker-Lewis index, and Comparative fit index values are respectively 0.908, 0.958, and 0.964, in which all are at least 0.90, indicating a good model fit (Bentler, 1990; Hu and Bentler, 1998); otherwise, the root mean square error of approximation values is 0.053, or less than 0.08, representing a good model fit.

4.4. Confirmatory factor analysis

Our study conducts three measurement models to confirm that the original model is the best: (1) one-factor model (combining all items into one construct); (2) four-factor model (combining the need for recovery and emotional exhaustion); and (3) five-factor model (original model). Through the chi-square different test and CFI, the results in Table 5 show that our model (original model) is better than the two alternate models.

4.5. Structural model

Table 6 shows the results between FSOP, psychological detachment, need for recovery, emotional exhaustion, and service quality. Our results display that FSOP have a positive effect on psychological detachment, thus supporting Hypothesis 1. Hypotheses 2 and 3 postulate that FSOP have a negative effect on the need for recovery and emotional exhaustion. Our study's results show that FSOP have a negative and significant effect on the need for recovery and emotional exhaustion, therefore supporting Hypotheses 2 and 3. Furthermore, psychological detachment influences the need for recovery negatively, but psychological detachment is not influenced by emotional exhaustion significantly. Therefore, Hypothesis 4 is supported, but Hypothesis 5 is not. Next, we examine the correlation between two strain indicators and service quality. The results show that the need for recovery has no significant effect on service quality, but emotional exhaustion has a negative effect on service quality, hence supporting Hypothesis 7, but not Hypothesis 6.

Although not included in our hypotheses, we are interested in the meditative effect of psychological detachment between FSOP and the need for recovery. Based on our results, our study finds an indirect effect between FSOP and the need for recovery ($\beta = -0.124$, $t = -1.841$), showing psychological detachment partially mediates the relation between FSOP and the need for recovery.

5. Discussion

Our research shows that FSOP are very important, when people are concerned about how to decrease strain symptoms, and can further influence service quality. Compared with other research studies on service quality in Taiwan (Wu and Cheng, 2013; Chen and Hu, 2013), which just focused on the tangible antecedent variables and outcomes of service quality, our research contributes to knowledge relating to the airline industry by extending the research on FSOP, psychological mechanism, and service quality. First, our research discovers that FSOP not only negatively affect the need for recovery, but also impact emotions negatively. FSOP indicate that employees perceive that their supervisor or firms support families in many ways, like providing employees with flexible time to work, family leave, and elder care. As the population

Table 3
Means, standard deviations, square root of AVE, and correlations among variables.

| Variables | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------|-------|-------|----------|----------|----------|--------|---------|-------|
| 1. FSOP | 3.171 | 0.835 | 0.785 | | | | | |
| 2. PD | 3.517 | 0.813 | 0.651** | 0.791 | | | | |
| 3. EE | 2.201 | 1.213 | -0.596** | -0.481** | 0.884 | | | |
| 4. NFR | 3.116 | 0.925 | -0.670** | -0.588** | 0.706** | 0.815 | | |
| 5. SQ | 3.490 | 0.684 | 0.096 | 0.054 | -0.204** | -0.101 | 0.853 | |
| 6. CE | 2.596 | 0.698 | 0.055 | 0.118 | -0.119 | -0.134 | 0.193** | 0.740 |

Note: The figures in diagonal text represent AVE values for each construct. **p < 0.01.

Table 4
Goodness-of-fit indices for the structural model.

| Goodness-of-fit measure | Value |
|--|-------|
| Chi-square value (x ²)/degrees of freedom (DF) | 1.572 |
| Goodness-of-fit index (GFI) | 0.851 |
| Comparative fit index (CFI) | 0.964 |
| Incremental fit index (IFI) | 0.964 |
| Tucker-Lewis index (TLI) | 0.958 |
| Normed-fit index (NFI) | 0.908 |
| Parsimony CFI (PCFI) | 0.829 |
| Parsimony NFI (PNFI) | 0.780 |
| Standardized RMR (SRMR) | 0.079 |
| Root mean-square error of approximation (RMSEA) | 0.053 |
| PCLOSE | 0.284 |

Table 5
Chi-square different test between the three models.

| Model | χ ² | d.f. | CFI |
|----------------------|----------------|------|-------|
| 1. One-factor model | 2357.832 | 343 | 0.634 |
| 2. Four-factor model | 984.157 | 337 | 0.883 |
| 3. Five-factor model | 686.929 | 333 | 0.892 |

| Chi-square model comparison tests | | | |
|-----------------------------------|------------------|-------|---------------------------|
| Δ Models | Δ χ ² | Δd.f. | Chi-square critical value |
| Model 1 vs. Model 3 | 1670.903 | 10 | 18.307 |
| Model 2 vs. Model 3 | 297.228 | 4 | 9.487 |

Table 6
Analysis results of the model.

| Hypothesis | Path | Estimate | S.E. | t | Result |
|------------|------------|----------|-------|-----------|---------------|
| H1 | FSOP → PD | 0.660 | 0.046 | 14.347*** | Supported |
| H2 | FSOP → NFR | -0.580 | 0.098 | -5.918*** | Supported |
| H3 | FSOP → EE | -0.678 | 0.089 | -7.618*** | Supported |
| H4 | PD → NFR | -0.186 | 0.101 | -1.841* | Supported |
| H5 | PD → EE | 0.054 | 0.097 | 0.556 | Not supported |
| H6 | NFR → SQ | 0.131 | 0.083 | 1.578 | Not Supported |
| H7 | EE → SQ | -0.281 | 0.089 | -3.157*** | Supported |

Note: FSOP = family-supportive organization perceptions; PD = psychological detachment; NFR = need for recovery; EE = emotional exhaustion; SQ = service quality. *p < 0.05, ***p < 0.001.

of the nation's elderly grows, the demands for caring for employees' elderly parents, aunts, and uncles go up. Personal responsibilities such as providing assistance, paying for professional caregivers, and locating services can be expensive, time consuming, and exhausting, often distracting employees from their work roles (Noe et al., 2014). By providing information, referrals, and paid time off, employees can decrease this exhaustion and fatigue. When firms in the airline industry are willing to give employees family support, it relieves the burden placed upon employees and helps them to perceive positive support from the organization. It is beneficial for HR in the airline industry to figure out an effective way to reduce the negative psychological emotion from employees, because the

strain symptom might result in greater employee stress, less employee satisfaction, loss of productivity, poor service quality, and higher turnover, which are all costly for companies (Noe et al., 2014).

Second, emotional exhaustion mediates the relation between FSOP and service quality. When employees receive family-support benefits from the organization, such as leave to take care of the elderly, they can then balance their roles in family and work, solve their role conflict problems (Noe et al., 2014), relieve emotional exhaustion, concentrate better on their work, and consequently improve service quality. High-quality service is associated with several key organizational outcomes, including high market share (Buzzell and Gale, 1987), improved profitability relative to competitors (Kearns and Nadler, 1992), and enhanced customer loyalty (Zeithaml and Bitner, 1996). This helps an airline differentiate its image from its competitors, which will result in retaining existing passenger patronage and in enticing passengers from other airlines. Therefore, the study of service quality can provide the airline industry with a powerful instrument to obtain a strategic competitive advantage.

Regarding the limitations of this study, first, Lobel and Kossek (1996) contended that offering FSOP does not totally address all employee concerns unless these program offerings are also accompanied by a change in organizational norms. Galinsky and Stein (1990) suggested that the environment of the firm is important to the success of policy implementation. Moreover, employees might be afraid that if they used the benefits of the organization, then their supervisors would pay less attention to them, which might harm their career plans (Anderson et al., 2002). This is a key point, because FSOP's implementation might not have the proper effect if employees do not perceive the organization's environment as supporting their efforts to seek a balance between their work and non-work lives. In the future, research can incorporate other variables, such as organizational culture, team atmosphere, organizational trust, or supervisor's trust into the study to further expand the results.

Second, regarding the airline industry, there might exist different organizational cultures or influences. Even within the same airline company, different functions or positions may exhibit different relations. Further research on the airline industry can focus on different functions or different types of operations, such as technicians or flight attendants.

Finally, our research performs a cross-section analysis, not a longitudinal analysis. Further research may use longitudinal analysis to examine the correlations among FSOP psychological detachment, strain symptoms, and service quality.

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