a valid psychological construct, and termed it "core self-evaluations", consisting of self-esteem, locus of control, neuroticism (or emotional stability), and generalized self-efficacy.

Judge *et al.* (1997) propose that core evaluations are individuals' fundamental, bottom-line evaluations which subconsciously affect their self-appraisals, and how they value the world and others. At a primary level, people with high-CSE are commonly characterized by feelings of self-confidence, self-worth, self-potency, and freedom from anxiety (Hiller and Hambrick, 2005). Similar to other personal traits, CSE has been adopted as a predictor to examine work performance. Job satisfaction and job performance are the two main criteria of interest to industry/organization psychologists regarding both their conceptual and empirical relationships with the CSE traits (Bono and Judge, 2003; Erez and Judge, 2001; Judge and Bono, 2001). Research has found that people with positive self-evaluations are not only more effective at overcoming obstacles by using better problem solving strategies, they also perform better in positions requiring positive interpersonal relations or stress tolerance (Bono and Judge, 2003).

Cabin crews work under tremendous stress due to a variety of passengers issues (such as unruly or demanding passengers) or unexpected situations (both service- and emergency-related) occurring on-board. However, the negative consequences of cabin work tend to be elided by the attractive job image and additional benefits, such as regular travel overseas. Indeed, demand for such job remains extremely high in Asia, even as the heavy demands of such work have gained increasing attention in the recent years, both practitioners and academics (Chen and Chen, 2012a; Liang and Hsieh, 2005). There is no doubt that work experience and support from manages and airlines are essential if flight attendants are to be able to cope with the pressures and uncertainties they face both at work and in their personal lives. Moreover, the significance of a flight attendant's personality should not be underestimated. Since good interpersonal skills and high stress tolerance are considered critical critical for this kind of work, people with high CSE are expected to do better as flight attendants.

The relation between core self-evaluations and job performance, including task performance and organizational citizenship behaviors (OCB), has been confirmed in a number of studies (Judge *et al.*, 1998; Piccolo *et al.*, 2005; Sheykhshabani, 2012). This paper intends to extend the linkage by examining whether cabin attendants' core self-evaluations predict their safety behaviors, and specifically their upward safety communication, compliance and proactive safety behaviors. While we consider cabin crews' safety behaviors as the organizational citizenship behaviors focusing on safety related performance, the results of this study may help indicate whether the existing causality between CSE and OCB still holds in the context of safety. Based on the proposal that cabin crews' upward safety communication serves as a mediator, the related hypotheses are as follows.

H8. A cabin crew's CSE is positively associated with their upward safety communication.
H9. A cabin crew's CSE is positively associated with their compliance and participation safety behaviors.
H10. A cabin crew's upward safety communication mediates the relationship between CSE and their compliance and proactive safety behavior.

3. METHOD

3.1.Participants and Procedures

The study population is the cabin crew who works for international airlines in Taiwan. Due to cabin crew's shifted work schedule, the paper-based survey was initially distributed through each airline's internal contact. Questionnaires with sealable stamped addressed envelopes were either deposited in the individual mailbox or distributed on board an aircraft. Data were collected during the three-month period from April to June, 2012. A total of 450 surveys were distributed. Three hundred and nine samples were returned, among which 296 ones were effective, representing an acceptable response rate of 66 %.

The majority of respondents are young women, with 91.6 % of the respondents being female, mostly aged ranged from 26 to 30 years old (42.9%). The respondents' years of tenure mainly fell into the ranges of one to five years (36.8%) and six to ten years (24%). Regarding the ranking, 72.3% of the samples were basic level flight attendants, and 8.4 % had a position as chief purser. 69.9 % of the respondents were single and 83.8% of the respondents had no children. The major range of flight time within the previous three months was between 71 and 80 hours.

3.2.Measures

The scales used to obtain the measures of the variables are described below. All items were rated on a seven-point Likert scale ranging from 1= *strongly disagree* to 7= *strongly agree.*

3.2.1. Perceived SMS performance

The scale consists of two sub-constructs, i.e. Policy and Practice, containing 17 items, based on the SMS performance evaluation scale developed by Chen and Chen (2012b). Cabin crew was asked to evaluate the performance of company's SMS by the level of agreement with a number of statements in this study. Sample items include: "The top management participates in SMS related activities" for Policy and "Employees periodically take training programs related to emergency preparedness and response plans" for Practice. The reliability coefficient values are 0.92 and 0.93 for Policy and Practice dimensions, respectively.

3.2.2. Benevolent leadership

The managers' benevolent leadership was assessed using five items taken from the subscale of Paternalistic Leadership Measure developed by Cheng *et al.* (2000). This scale has demonstrated consistent and good psychometric properties in several studies (e.g., Chen *et al.*, 2011). Example item is: "Beyond work relations, my supervisor expresses concern about my daily life." The reliability coefficient in this study is 0.93.

3.2.3. Core self-evaluations

The 12-items Core Self-Evaluations Scale (CSES) developed by Judge *et al.* (2003) was employed to measure cabin crew's CSE. The CSES measures a single factor that is composed of self-esteem, locus of control, generalized self-efficacy, and emotional stability. Sample items are "When I try, I generally succeed," and "Sometimes, I do not feel in control of my work. (reverse-scored)" The reliability coefficient is 0.89.

3.2.4. Upward safety communication

Five items from a scale reported by Hofmann and Morgeson (1999) were utilized to measure cabin crew's willingness of conducting upward safety communication. To precisely identify the intention of cabin crew's specific communication behavior, one item was added to the questionnaire, which asks "I'd like to propose suggestions regarding safety issues." Other example items include: "I feel comfortable discussing safety behavior with my supervisor," and "I try to avoid talking about safety issues with my supervisor. (reverse-scored)" The reliability coefficient for this scale is 0.88.

3.2.5. Safety behavior

Safety behavior consisting of two components (i.e. compliance safety behavior and proactive safety behavior) is adopted from Neal and Griffin (2006). Compliance safety behavior evaluates the core tasks that cabin crew has to accomplish to maintain flight safety. To precisely evaluate flight attendants' compliance behavior, one item was reworded to "During ground check, I will make sure all emergency equipment has been well-loaded." Proactive safety behavior applied the three items of safety participation subscale assesses the extent to which cabin crew helps develop an environment that supports safety. Some slight adjustments were made to the items to better match the work characteristics of flight attendants and the main focus of the present study. An example item is "I voluntarily carry out tasks or activities that help improve cabin safety." The reliability coefficient values for safety compliance and safety participation are 0.94 and 0.93, respectively.

3.3. Data analysis

The Cronbach's α coefficient is applied to evaluate the internal consistency of each construct. A Structural Equation Modeling (SEM) is carried out to evaluate the measurement and structural models by using the LISREL 8.52 computer program (Joreskog & Sorbom, 2001). Since all items are measured on an ordinal scale, the correlation matrix is used as input data, and the structural model is estimated with the maximum likelihood technique. According to Anderson and Gerbing's (1988) two-step approach, a measurement model is first examined using confirmatory factor analysis (CFA) to assess its adequacy, followed by testing the structural model for statistical acceptability in the second step. Various fit indices are used to assess the fitness of the model, including the following: goodness-of-fit index (GFI), adjusted goodness-of-it index (AGFI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). Suggested by Hair et al. (2006), values of GFI, AGFI and CFI of 0.9 or above and RMSEA of 0.05 or less all indicate a good fit between the model and the data.

4. RESULTS

Before examining the measurement and structural models, the results of the descriptive statistics and reliability assessment are discussed as shown in Table 1. All the scales showed good reliability, with Cronbach's α values between 0.88 and 0.94, satisfying the criterion of 0.70 (Nunnally, 1978). The mean scores, obtained by averaging the associated items for each factor are calculated and used in subsequent analyses.

Table 1. Descriptive statistics and Cronbach's α (N = 296)

Constructs		Items	Mean	S.D.	Construct Mean	Cronbach's α
Safety Management System (SMS)	PO	Company develops the precise standard to monitor and evaluate the SMS performance.	5.07	1.59	4.83	0.92
		Company continuously improves the SMS performance.	4.90	1.48		
		Company's internal reporting channel is highly accessible.	4.49	1.62		
		Top management participates in the SMS related activities.	4.86	1.63		
		Management handles safety issues following just culture.	4.78	1.60		
		Top management declares a determination to execute SMS, even when the company finance is in a down cycle.	4.46	1.55		
		Top management declares commitment in formal documents.	5.22	1.43		
	PA	Employees are trained to execute the plan periodically.	5.16	1.44	5.11	0.93
		Company simulates the plan periodically.	5.70	1.40		
		Company establishes the plan with clear procedures and individual responsibility.	5.62	1.39		
		The contents of the SMS manual are readily understood.	5.27	1.50		
		Employees upgrade their self-management abilities through training	4.75	1.65		
		Employees learn comprehensive concepts of SMS through trainings.	4.75	1.67		
		Company provides continuous training.	5.41	1.41		
		Employees know how to execute SMS through training.	4.72	1.70		
		Company provides diverse training programs.	4.36	1.66		
		Company holds regular SMS promotion activities.	5.35	1.39		
Benevolent Leadership (BL)		Beyond work relations, my supervisor expresses concern about my daily life.	4.04	1.67	3.82	0.93
		My supervisor ordinarily shows a kind concern for my comfort.	4.01	1.85		
		My supervisor will help me when I'm in an emergency.	3.70	1.67		
		My supervisor takes very thoughtful care of subordinates who have spent a long time with him/her.	3.99	1.82		
		My supervisor takes good care of my family members as well.	3.37	1.68		
Core Self-evaluations (CSE)		I am confident I get the success I deserve in life.	5.15	1.05	5.05	0.89
		Sometimes I feel depressed. (R)	4.60	1.42		
		When I try, I generally succeed.	5.00	1.04		
		Sometimes when I fail I feel worthless. (R)	5.15	1.40		
		I complete tasks successfully.	5.32	0.89		
		Sometimes, I do not feel in control of my work. (R)	4.41	1.16		
		Overall, I am satisfied with myself.	5.41	1.06		
		I am filled with doubts about my competence. (R)	5.39	1.24		
		I determine what will happen in my life.	5.16	1.14		
		I do not feel in control of my success in my career. (R)	4.48	1.14		
		I am capable of coping with most of my problems.	5.28	0.93		
		There are times when things look pretty bleak and hopeless to me. (R)	5.30	1.38		
Upward Safety Communication (USC)		I'd like to propose suggestions regarding safety issues.	4.64	1.32	4.38	0.88
		I feel comfortable discussing safety behavior with my supervisor.	4.16	1.27		
		I try to avoid talking about safety issues with my supervisor. (R)	4.34	1.40		
		I feel that my supervisor openly accepts ideas for improving safety.	4.18	1.24		
		I am reluctant to discuss safety-related problems with my supervisor. (R)	4.61	1.45		
		I feel that my supervisor encourages open communication about safety.	4.34	1.19		
Compliance Safety Behavior (CSB)		During ground check, I will make sure all emergency equipment has been well-loaded.	5.76	1.18	5.68	0.94
		I follow the correct safety procedures to carry out my job.	5.67	1.22		
		I ensure the highest level of safety when I carry out my job on board.	5.61	1.24		
Proactive Safety Behavior (PSB)		I promote the safety program within the organization.	4.80	1.45	4.82	0.93
		I put in extra effort to improve the safety on board.	5.09	1.48		
		I voluntarily carry out tasks or participate in activities that help improve cabin safety.	4.57	1.59		

Note: (R) denotes reversed item and has been reverse coded.

4.1. Measurement Model

Confirmatory factor analysis was conducted to analyze the validity and reliability of the six constructs. According to Hair et al. (2006), the convergent validity of CFA results has to be supported by item reliability, construct reliability and average variance extracted. As shown in Table 2, all *t* values appear to be significant ($p < 0.01$). The construct reliability estimates (CR) range from 0.90 to 0.97, well above the critical value of 0.70 suggested by Hair et al. (1998). The average variance extracted (AVE), which measures the amount of variance that is captured by the latent variable in relation to the amount of variance due to measurement error, lies between 0.54 and 0.91, also exceeding the value of 0.50 suggested by Fornell and Larcker (1981). These results indicate that the measurement items have high reliability and validity.

Table 2. Convergent validity

Constructs	Indicators	Item reliability			CR	AVE
		Standardized Factor loadings	Standard errors	*t*-Value		
SMS Performance	PO	0.95	0.09	21.79**	0.95	0.91
	PA	0.95	0.08	22.12**		
Benevolent Leadership	BL1	0.92	0.15	20.82**	0.97	0.86
	BL2	0.94	0.11	21.68**		
	BL3	0.94	0.12	21.60**		
	BL4	0.94	0.11	21.53**		
	BL5	0.93	0.14	21.05**		
Core Self-evaluations	CSE1	0.76	0.42	15.17**	0.91	0.54
	CSE2	0.65	0.56	12.32**		
	CSE3	0.72	0.49	13.93**		
	CSE4	0.74	0.44	14.68**		
	CSE5	0.73	0.47	14.27**		
	CSE6	0.65	0.57	12.07**		
	CSE7	0.90	0.19	19.61**		
	CSE8	0.76	0.40	15.43**		
	CSE9	0.67	0.56	12.99**		
	CSE10	0.66	0.56	12.30**		
	CSE11	0.71	0.50	13.75**		
	CSE12	0.78	0.42	15.16**		
Upward Safety Communication	USC1	0.82	0.33	16.86**	0.90	0.81
	USC2	0.84	0.30	17.50**		
	USC3	0.68	0.52	13.14**		
	USC4	0.81	0.34	16.63**		
	USC5	0.78	0.39	15.57**		
	USC6	0.73	0.46	14.21**		
Compliance Safety Behavior	CSB1	0.90	0.19	19.72**	0.94	0.84
	CSB2	0.95	0.09	21.82**		
	CSB3	0.91	0.18	20.06**		
Proactive Safety Behavior	PSB1	0.91	0.16	20.40**	0.94	0.85
	PSB2	0.94	0.12	21.45**		
	PSB3	0.94	0.14	21.10**		

Note: ** denotes p <0 .01.

Discriminant validity was assessed by comparing the construct correlations with the square root of the average variance extracted (Fornell & Larcker, 1981). The results shown in Table 3 indicate that the square root of the average variance extracted for each construct is greater than the levels of the correlations involving the construct, and thus discriminant validity is confirmed.

Table 3. Discriminant validity.

Constructs	SMS	BL	CSE	USC	CSB	PSB
SMS	0.95					
BL	0.75**	0.93				
CSE	0.49**	0.56**	0.73			
USC	0.73**	0.78**	0.56**	0.90		
CSB	0.62**	0.61**	0.46**	0.60**	0.92	
PSB	0.74**	0.78**	0.52**	0.77**	0.78**	0.92

Note: * denotes $p < 0.05$, ** denotes $p < 0.01$.
SMS, Safety Management System Performance; BL, Benevolent Leadership; CSE, Core Self-evaluations; USC, Upward Safety Communication; CSB, Compliance Safety Behavior; PSB, Proactive Safety Behavior. Square root of average variance extracted (AVE) is shown on the diagonal of the matrix.

4.2. Structural Model and Hypotheses Testing

A structural equation model was applied to estimate the relationships between selected antecedents and cabin crew's safety behavior, with upward safety communication serving as a mediator. Figure 2 shows the estimated model with the standardized path coefficients. The fit indices of the structural model are summarized as follows: $\chi^2 = 396.41$($p = 0.00$), df = 150, $\chi^2/df = 2.64$, GFI = 0.89, AGFI = 0.85, RFI= 0.98, NFI = 0.98, and NNFI= 0.98. The alternative indices are CFI= 0.98, RMR =0.03, and RMSEA= 0.07. A comparison of these results with the corresponding critical values suggests that the conceptual model fits the empirical data reasonably well (Fornell & Larcker, 1981).

Regarding the hypotheses tests, eight out of the ten hypotheses are supported. The effects of upward safety communication on both types of safety behavior are significantly positive (β_1=0.26, t= 2.43; β_2=0.39, t= 4.98), indicating that the more positive attitude a cabin crew has with regard to upward safety communication, the more likely they will perform in-role and extra-role safety behaviors. H1 is thus confirmed. Regarding the direct effect of the three exogenous predictors on cabin crews' upward safety communication, all paths show a significantly direct influence, and thus H2, H5 and H8 are all supported. The statistical data also reveals the direct effect which perceived SMS performance has on a cabin crew's compliance and proactive safety behaviors (γ_2= 0.31, t = 3.42; γ_1= 0.20, t = 3.09), and H3 thus is supported. While department managers' benevolent leadership has a direct effect on cabin crews' proactive safety behavior (γ_6= 0.15, t = 2.60), it does not have the same effect on their compliance safety behavior (γ_2= 0.09, t = 0.85). Meanwhile, flight attendants' CSE has a significant positive effect on their compliance safety behavior (γ_9= 0.15, t = 2.60) and insignificant effect on their proactive safety behavior (γ_2= 0.07, t = 1.54). Therefore H6 and H9 are partially supported. Turning to the mediating effects of upward safety communication, the path coefficients reveal the complete mediating effects on the two hypothetical links between benevolent leadership and a cabin crew's compliance safety behavior, as well as cabin crew's CSE and proactive safety behavior. The partial mediating effects are revealed in other hypothesized links. Accordingly, H4, H7 and H10 are supported. The three selected predictors, which represent organizational, group and

individual aspects, are all proved to directly or indirectly influence a cabin crew's safety behaviors, via the full or partial mediating effects generated by upward safety communication.

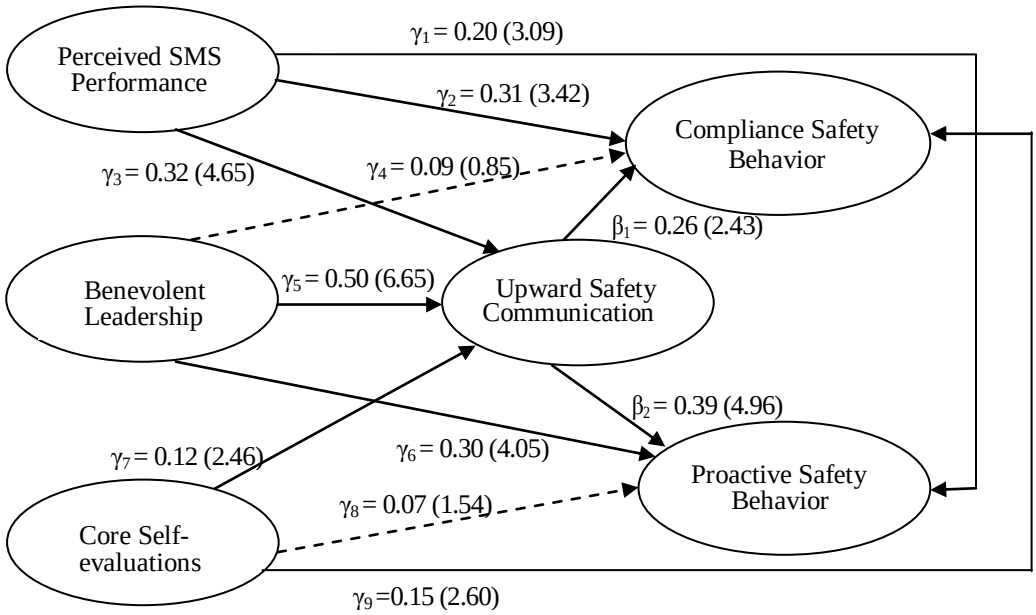

Figure 2. Estimated model.

Note.1. The values in the parentheses are t-values. 2. Solid lines denote significance at the 5% level.

Table 4 presents the effects (i.e. direct, indirect, and total) of the tri-dimensional determinants on cabin crews' compliance and participation safety behaviors. The organizational aspect (cabin crew's perceived airlines SMS performance) has the greatest effects on flight attendants safety behaviors, compared to the group and individual ones.

Table 4 Direct, indirect, and total effects of compliance and proactive safety behaviors.

Path	Direct Effect	Indirect Effect	Total effect
SMS performance → Compliance safety behavior	0.31	0.08	0.39
SMS performance → Proactive safety behavior	0.20	0.14	0.34
Benevolent leadership → Compliance safety behavior	—	0.13	0.13
Benevolent leadership → Proactive safety behavior	0.30	0.20	0.50
Core self-evaluations → Compliance safety behavior	0.15	0.03	0.18
Core self-evaluations → Proactive safety behavior	—	0.05	0.05

5. DISCUSSION AND CONCLUSION

Cabin crew's safety behavior is critical to airlines safety performance and may directly affect air travelers' safety concern. The effects of organizational, group, and individual factors on types of

cabin crews' safety behaviors have been examined and confirmed in the current study. The results show that these behaviors are simultaneously and positively associated with all three factors. Based on the empirical data, the mediating effect of upward safety communication has also been demonstrated. The first conclusion of this study is that when a cabin crew is willing to conduct upward safety communication, they are more likely to perform safety behavior well.

Regarding the organizational factor, a cabin crew's perceptions of their airline's SMS performance has significant and positive effects on their upward safety communication, compliance and proactive safety behaviors. Note that airlines' with an accredited SMS performance may be viewed as having a positive organizational safety culture (Lewis, 2008). If flight attendants recognize that the whole organization serves as one team to carry out the airline's SMS program, they are more likely to see themselves as team members, and hence devote more effort to meet their job requirements and further participate in safety promotion activities. This linkage between an airline's SMS and its employees' safety attitude supports the findings of Remawi et al. (2011). The present research also reveals that the organizational factor (e.g. perceived SMS performance) has more predictive power with regard to cabin crew's safety behaviors (a combination of compliance and proactive safety behaviors) than the selected group and individual factors, as it shows the greatest total effect. From a practical perspective, the performance of an SMS reveals the determination of an airline's managers to improve safety, and this can then convey to all employees the importance that their company places on this issue (Hsu, Li, & Chen, 2010), with safety then regarded as a collective responsibility. With the use of an SMS which aims to integrate the entire organization as one team, following principles that are laid down at the top, it is more likely then cabin crew will be motivated to conduct upward safety communication and safety behaviors, based on empirical evidence provided by the present study. Therefore, it is strongly recommended that airlines dedicate more efforts to perform and promote SMS to enhance cabin crew's safety behaviors.

As for the group-aspect indicator, to the best of the authors' knowledge, the present study is one of the first to investigate whether benevolent leadership leads to subordinates' safety behaviors. The results support the positive relations between department managers' benevolent leadership, cabin crew's upward safety communication and proactive safety behavior. However, the linkage between benevolent leadership and flight attendants' compliance safety behavior was found to be insignificant, and fully mediated by the upward safety communication. These findings do not entirely reconfirm the strong causality between leadership and employees' safety behaviors, which previous research observed (e.g. Clarke & Ward, 2006; Yang et al., 2009). More specifically, the empirical data suggests that the influence which benevolent leadership has on employees' organizational citizenship behavior is partially replicated in the case of cabin crew's safety citizenship behavior (Farh et al., 2008; Hsu, Hu, Ling, Cheng, & Chou, 2004).

The insignificant linkage between department managers' benevolent leadership and cabin crew's safety compliance (also regarded as in-role safety behavior) is unexpected but comprehensible. It is mandatory for all cabin crew trainees to pass through safety and emergency procedure training before being qualified to work as flight attendants (Rhoden et al., 2008), and it is thus expected that crew members will follow this training and comply with the various situations that may arise on-board within limited time, flight attendants tend to formulate rules of thumb for teamwork. Compared to manager's leadership, personal safety awareness and cooperation between crew members seem to have more direct influences on how flight attendants obtain their in-role safety behavior. Nevertheless, the considerable effect which managers' benevolent leadership has on cabin crew's proactive safety behavior deserves further attention.

When a cabin crew takes the initiative to participate in safety related activities, or help develop a safety-supportive environment, they not only reveal their significant recognition of the importance of safety, but also demonstrate their willingness to perform extra-role safety behavior. Since reciprocal relationships are highly valued in a Chinese cultural context, social exchange theory has been able to apply in the current paper to employ as the theoretical framework linking leadership styles to employee outcomes (Chen, Chen, & Portnoy, 2009). The study results provide valuable evidence in support of the argument that cabin crews may transform the respect, gratitude and commitment they feel toward a benevolent leader into making greater efforts to promote safety (Cheng et al., 2004). Benevolent leadership should thus be used as a management technique when supervising cabin crews.

In terms of the possible effects of cabin crew's CSE, the estimated path coefficients reveal significant impacts on a cabin crew's upward safety communication and compliance safety behavior, but an insignificant effect on proactive safety behavior. Although the relation between core self-evaluations and job performance (e.g. organizational citizenship behaviors) has been supported in previous studies (Judge et al., 1998; Piccolo et al., 2005), to date there has been a lack of empirical data to confirm the causality between individual CSE and safety behavior. We thus provide the first evidence which shows that individuals tend to perform their in-role safety behavior better when they have higher levels of self-esteem, generalized self-efficacy, locus of control and emotional stability. Since these characteristics are fundamental with regard to how one appraise oneself, others and external environment (Judge et al., 1997), people with higher CSE perceptions are likely to have more positive attitudes toward their personal obligations, and work harder to ensure the completion of their designated tasks. In the case of a cabin crew's safety responsibilities, this indicates that they will pay more attention to their in-role safety behavior, including reporting irregular situations and conducting a variety of mandatory safety checks. As for a cabin crew's proactive safety behavior, the results of this study do not support the significant effect of CSE that was hypothesized. From a comprehensive point of view, based on the conceptual model, cabin crew's extra-role safety behavior is more closely related to the group and organizational levels of their tasks than the personal one. Despite the fact that flight attendants' perceived CSE does not directly lead to proactive safety behavior, they will perform it when they have positive attitude to conduct upward safety communication, which involves interacting with others rather than merely being self-administrated.

The findings of this study contribute to enhancing the limited literature concerning flight attendants' safety behavior, and have some significant managerial implications. To motivate cabin crews to communicate upward regarding safety issues, thus ensure good SMS performance, it is important to encourage department leaders to express personal concerns and cares with regard to their staff, and to identify and hire people with high CSE. Airlines may rely on the practice of an SMS not only to support a positive safety culture (FAA, 2006), but also to increase cabin crews' willingness to perform safety behavior. In addition, cabin crews respond positively to a manager's benevolent leadership, and this indicates that benevolent leaders are needed to develop a warm family-like environment for their staff. If flight attendants view themselves as working in such an environment, they are more inclined to participate in safety promotion during off hours. Meanwhile, airlines may use items from CSE surveys during tests or face-to-face interviews when recruiting flight attendants to help identify the more appropriate candidates.

REFERENCES

Barling, J., Loughlin, C., Kelloway, E. K. (2002). Development and test of a model linking

safety-specific transformational leadership and occupational safety. *Journal of Applied Psychology*, 87(3), 488-496.

Barrick, M. R., Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1–26.

Bentley, T. A., Haslam, R. A. (2001). A comparison of safety practices used by managers of high and low accident rate postal delivery offices. *Safety Science*, 37, 19-37.

Bono, J. E., Judge, T. A. 2003. Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality*, 17, S5-S18.

Borman, W. C., Motowidlo, S. J. 1993. Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personal selection in organizations* (pp.71-98). San Francisco, CA: Jossey-Bass.

Chen, C. F., Chen, S. C. (2012a). Burnout and work engagement among cabin crew: Antecedents and consequences. *International Journal of Aviation Psychology*, 22(1), 41-58.

Chen, C. F., Chen, S. C. (2012b). Scale development of Safety Management System evaluation for the airline industry. *Accident Analysis and Prevention*, 47, 177-181.

Chen, C. F., Chen, S. C. (2011). *Perception gaps in the execution of Safety Management System – A case study of the airline industry*. Presented at the EASTS Conference, Jeju.

Chen, C. F. (2006). Job satisfaction, organizational commitment, and flight attendants turnover intentions: A note. *Journal of Air Transport Management*, 12(5), 274-276.

Chen, X. P., Eberly, M. B., Chiang, T. J., Farh, J. L., Cheng, B. S. (2011). Affective Trust in Chinese Leaders: Linking Paternalistic Leadership to Employee Performance. *Journal of Management*. doi: 10.1177/0149206311410604.

Chen, Y., Chen, X. P, Portnoy, R. (2009). To whom do the positive and negative reciprocity apply? Inequitable offers: Culture, emotion, and reciprocity. *Journal of Experimental Social Psychology*, 45, 24-34.

Cheng, B. S., Chou, L. F., Wu, T. Y., Huang, M. P., Farh, J. L. (2004). Paternalistic leadership and subordinate responses: Establishing a leadership model in Chinese organizations. *Asian Journal of Social Psychology*, 7, 89-117.

Cheng, B. S., Shieh, P. Y., Chou, L. F. (2002). The principal's leadership, leader-member exchange quality, and the teacher's extra-role behavior: The effects of transformational and paternalistic leadership. *Indigenous Psychological Research in Chinese Societies*, 17, 105-161.

Cheng, B. S., Chou, L. F., Farh, J. L. (2000). A triad model of paternalistic leadership: Its constructs and measurement. Indigenous *Psychological Research in Chinese Societies*, 14, 3-64.

Chou, L. F., Cheng, B. S., Jen, C. K. (2005). *The contingent model of paternalistic leadership: Subordinate dependence and leader competence*. Paper presented at the Annual Meeting of Academy of Management, Hawaii, USA.

Cigularov, K. P., Chen, P. Y., Rosecrance, J. (2010). The effects of error management climate and safety communication on safety: a multi-level study. *Accident Analysis and Prevention*, 42(5), 1498-1506.

Clarke, S. (2006). The relationship between safety climate and safety performance: A meta-analysis of the roles of person and situation factors. *Journal of Occupational Health Psychology*, 11(4), 315-327.

Clarke, S., Ward, K. (2006). The role of leader influence tactics and safety climate in engaging employees' safety participation. *Risk Analysis*, 26(5), 1175-1185.

Cooper, M. D., Phillips, R. A. (2004). Exploratory analysis of the safety climate and safety behavior relationship. *Journal of Safety Research*, 35, 497-512.

Detert, J. R., Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academic of Management Journal*, 50(4), 869-884.

Didla, S., Mearns, K., Flin, R. (2009). Safety citizenship behavior: a proactive approach to risk management. *Journal of Risk Research*, 12(3), 475-483.

Erben, G. S., Guneser, A. B. (2008). The relationship between paternalistic leadership and organizational commitment: Investigating the role of climate regarding ethics. *Journal of Business Ethics*, 82, 955-968.

Erez, A., Judge, T. A. (2001). Relationship of core self-evaluations to goal setting, motivation, and performance. *Journal of Applied Psychology*, 86, 1270–1279.

Farh, J. L., & Cheng, B. S. (2000). A cultural analysis of paternalistic leadership in Chinese organizations. In J T. Li, A. S. Tsai, E. Weldon (Eds.), *Management and organizations in the Chinese context* (pp. 85-127). London: Macmillan.

Farh, J. L., Liang, J., Chou, L. F., Cheng, B. S. (2008). Paternalistic leadership in Chinese organizations: Research progress and future research directions. In C. C. Chen & Y. T. Lee (Eds), *Business leadership in China: Philosophies, theories, and practices* (pp. 171-205). Cambridge, UK: Cambridge University Press.

Farh, J. L., Cheng, B. S., Chou L. F., Chu, X. P. (2006). Authority and benevolence: Employees' responses to paternalistic leadership in China. In A. S. Tsui, Y. Bian, & L. Cheng (Eds.) *China's domestic private firms: Multidisciplinary perspectives on management and performance* (pp. 230-260). New York: Sharpe.

Federal Aviation Administration, FAA (2006). Introduction to Safety Management Systems for Air Operators. No.: AC 120-92.

Fogarty, G. J., Shaw, A. (2010). Safety climate and the theory of planned behavior: Towards the prediction of unsafe behavior. *Accident Analysis and Prevention*, 42 (5), 1455-1459.

Fornell, C., Larcker, D. F. (1981). Structural equation models with unobservable variable and measurement error: Algebra and statistics. *Journal of Marketing Research*, 18(3), 382-388.

Francis, L. J. (1996). The relationship between Rosenberg's construct of self-esteem and Eysenck's two-dimensional model of personality. *Personality and Individual Differences*, 21, 483-488.

Fugas, C. S., Silva, S. A., Melia, J. L. (2012). Another look at safety climate and safety behavior: Deepening the cognitive and social mediator mechanisms. *Accident and Analysis and Prevention*, 45, 468-477.

Galotti, K. M., Ciner, E., Altenbaumer, H. A., Geerts, H. J., Rupps, A., Woulfe, J. M. (2006). Making a "major" life-frame decision: Individual differences in performance and affective reactions. *Personality and Individual Difference*, 41, 629-639.

Garland, H., Weinberg. R., Bruya, L., Jackson, A. (1988). Self efficacy and endurance performance: a longitudinal field test of cognitive mediation theory. *Applied Psychology: An International Review*, 37, 381-394.

Griffin, M. A., Neal, A. (2000). Perceptions of safety at work: A framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5(3), 347-358.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). New Jersey: Prentice-Hall.

Heuven, E., Bakker, B. A. (2003). Emotional dissonance and burnout among cabin attendants. *European Journal of Work and Organizational Psychology*, 12 (1), 81-100.

Hiller, N. J., Hambrick, D. D. (2005). Conceptualizing executive hubris: The role of (hyper-) core self-evaluations in strategic decision-making. *Strategic Management Journal*, 26, 297-319.

Hofmann, D. A., Morgeson, F. P., Gerras, S. J. (2003). Climate as a moderator of the relationship between leader–member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology*, 88, 170–178.

Hofmann, D. A., Morgeson, F. P. (1999). Safety-related behavior as social exchange: The role of perceived organizational support and leader-member exchange. *Journal of Applied Psychology*, 84(2), 286-296.

Hofmann, D. A., Stetzer, A. (1998). The role of safety climate and communication in accident interpretation: implications for learning from negative events. *Academy of Management Journal*, 41, 644-657.

Hogan, H., Olsen, S., Scobie, S. Chapman E., Sachs, R., Mckee, M., Vincent, C., Thomson, R. (2008). What can we learn about patient safety from information sources within an acute hospital: A step on the ladder of integrated risk management? *Quality and Safety in Health Care*, 17(3), 209-215.

Hogan, R. (1996). A socioanalytic perspective on the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 173–179). New York: Guilford.

Hsu, Y. L., Li, W. C., Chen, K. W. (2010). Structuring critical success factors of airline safety management system using a hybrid model. *Transportation Research Part E*, 46, 222-235.

Hsu, T. H., Hu, H. H., Ling, H. C., Cheng, B. S., Chou, L. F. (2004). The relationships between paternalistic leadership and organizational citizenship behaviors: The mediating effects of leader-member relationship quality, *Chiao Ta Management Review*, 24(2), 119-149.

Jong, D. J. P. J., Hartog, D. N. D. (2007). How leaders influence employees' innovative behavior. *European Journal of Innovation Management*, 10, 41-64.

Joreskog, K., Sorbom, D. (2001). *LISREL 8: User's reference guide*. Chicago, IL: Scientific Software International Inc.

Judge, T. A., Hurst, C. (2007). Capitalizing on one's advantages: Role of core self-evaluations. *Journal of Applied Psychology*, 5, 1212-1227.

Judge, T. A. (2004). Emotional stability, core self-evaluations, and job outcomes: A review of the evidence and an agenda for future research. *Human Performance*, *17*(3), 325-346.

Judge, T. A., Erez, A., Bono, Thoresen, C. J. (2003). The Core self-evaluations scale (CSES): Development of a measure. *Personnel Psychology*, 56, 303–331.

Judge, T. A., Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80–92.

Judge, T. A., Bono, J. E., Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237–249.

Judge, T. A., Erez, A., Bono, J. E. (1998). The power of being positive: The relationship between positive self-concept and job performance. *Human Performance*, 11, 167-187.

Judge, T. A., Locke, E. A., Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151–188.

Kao, L. H., Stewart, M., Lee, K. H. (2009). Using structural equation modeling to predict cabin safety outcomes among Taiwanese airlines. *Transportation Research Part E, 45*, 357-365.

Kath, L. M., Marks, K., Ranney, J. (2010). Safety climate dimensions, leader-member exchange, and organizational support as predictors of upward safety communication in a sample of rail industry workers. *Safety Science*, 48 (5), 643-650.

Kelloway, E. K., Barling, J. (2010). Leadership development as an intervention in occupational health psychology. *Work & Stress*, 24(3), 260-279.

Kelloway, E. K., Mullen, J. E., Francis, L. (2006). Injuring your leadership: How passive leadership affects employee safety. *Journal of Occupational Health Psychology*, 11(1), 76-86.

Lefton, L., & Brannon, L. (2002). *Psychology*. Boston, MA: Allyn & Bacon.

Lewis, C. (2008). A brief overview of Safety Management Systems (SMS). *Flight Safety Information Journal*, January.

Liang, S. C., Hsieh, A. T. (2005). Individual's perception of career development and job burnout among flight attendants in Taiwan. *The International Journal of Aviation Psychology*, 15(2), 119-134.

Mearns, K., Flin, R., Gordon, R., Fleming M. (1998). Measuring safety climate on off-shore installations. *Work & Stress*, 12, 238-254.

Mearns, K., Whitaker, S. M., Flin, R. (2003). Safety climate, safety management practice and safety performance in offshore environments. *Safety Science*, 41, 641-680.

Mullen, J. (2004). Investigating factors that influence individual safety behavior at work. *Journal of Safety Research*, 35, 275-285.

Musson, D. M., & Helmreich, R. L. (2004). Team training and resource management in healthcare: Current issues and future directions. *Harvard Health Policy Review, 5*(1), 25-35.

Neal, A., Griffin M.A. (2006). A Study of the Lagged Relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group Levels. *Journal of Applied Psychology*, 91 (4), 946-953.

Niu, C. P., Wang, A. C., Cheng, B. S. (2009). Effectiveness of a moral and benevolent leader: Probing the interactions of the dimensions of paternalistic leadership. *Asian Journal of Social Psychology*, 12(1), 32-39.

Nnunally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.

Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome.* Lexington, MA: Lexington.

Parasuraman, R., Molloy, R., Singh, I. L. (1993). Performance consequences of automation-induced "complacency". *International Journal of Aviation Psychology*, 3 (1), 1-23.

Parker, S. K., Axtell, C. M., & Turner, N. (2001). Designing a safety workplace: importance of job autonomy, communication quality, and supportive supervisors. *Journal of Occupational Health Psychology, 6*(3), 211-228.

Pellegrini, E. K., Scandura, T. A. (2008). Paternalistic leadership: A review and agenda for future research. *Journal of Management*, 34, 566-593.

Piccolo, R. F., Judge, T. A., Takahashi, K., Watanabe, N., Locke, E. A. (2005). Core self-evaluations in Japan: Relative effects on job satisfaction, life satisfaction, and happiness. *Journal of Organizational Behavior*, 26, 965-984.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., Bachrach, D. G. (2000). Organizational citizenship behavior: a critical review of the theoretical and empirical literature and suggestion for future research. *Journal of Management*, 26, 513-563.

Remawi, H., Bates, P., Dix, I. (2011). The relationship between the implementation of a Safety Management System and the attitudes of employees towards unsafe acts in aviation. *Safety*

Science, 49, 625-632.
Rhoden, S., Ralston, R., Ineson, E. M. (2008). Cabin crew training to control disruptive airline passenger behavior: A cause for tourism concern? *Tourism Management*, 29, 538-547.
Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
Sheykhshabani, S. H. (2012). *Core self-evaluations and job performance: Mediating role of goal orientations*. Presented at the international conference on management, behavioural sciences and economics issues, Penang, Malaysia.
Simpson, P., Owens, C., Edkins, G. (2004). Cabin crew expected safety behaviours. *Human Factors and Aerospace Safety*, 4(3), 153-167.
Smith, M., Cohen, H., Cohen, A., Cleveland, R. (1978). Characteristics of successful safety programs. *Journal of Safety Research*, 10(1), 5-15.
Transport Canada. 2008. Guidance on Safety Management Systems development. No.: AC 107-001.
United Kingdom Civil Aviation Authority (UKCAA). (2002). Safety Management Systems for commercial air transport operations. No.: CAP 712.
Wang, A. C., Cheng, B. S. (2009). When does benevolent leadership lead to creativity? The moderating role of creative role identity and job autonomy. J*ournal of Organizational Behavior*, 31, 106-121.
Wells, A. T. (1997). *Commercial aviation safety*. New York: Mc-Graw-Hill.
Wiggins, J. S. (Ed.). (1996). *The five-factor model of personality: Theoretical perspectives*. New York: Guilford.
Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E., Schaufeli, W. B. (2008). Working in the sky: A diary study on work engagement among flight attendants. *Journal of Occupational Health Psychology*, 13(4), 345-356.
Yang, C. C., Wang, Y. S., Chang, S. T., Guo, S. E., Huang, M. F. (2009). A study on the leadership behavior, safety culture, and safety performance of the healthcare industry. *World Academy of Science, Engineering and Technology*, 53, 1148-1155.
Yukl, G. (2002). *Leadership in Organizations* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
Zohar, D. (2002). Modifying supervisory practices to improve subunit safety: A leadership-based intervention model. *Journal of Applied Psychology*, 87(1), 156-163.
Zohar, D., Luria, G. (2003). The use of supervisory practices as leverage to improve safety behavior: A cross-level intervention model. *Journal of Safety Research*, 34, 567-577.